



# College AND UNIVERSITY Business

**NOVEMBER 1949: Budget Spadework ★ Trends in College Salaries ★ Cooperative Fund Raising ★ Natatorium and Buildings for Geology, Union and Fine Arts ★ Labor Saving Equipment**



## CAN COLLEGES COOPERATE ON FUND RAISING?

**PAUL FRANKLIN**

National Director of Fund Raising  
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SIX YEARS AGO, THIS COUNTRY'S LEADING NEGRO universities and colleges, desperately in need of operating money and unable to meet the need through their individual resources, united in a cooperative fund raising effort. The idea jibed well with the public's attitude toward collective enterprises and federated charitable fund raising, attracted distinguished lay leadership, and has been acclaimed as a most promising approach to the problem of financing private higher education.

Now, more than 3000 important business corporations contribute to the United Fund. Philanthropic foundations, cautious in their evaluation of new campaigns, contribute generously—350 of them. The students and faculty members of 64 large colleges give through their campus welfare chests. So do 40,000 other individuals. Approximately \$6,000,000 has been raised, all told.

Since the close of the war, practically all private colleges have faced extraordinary needs for funds. As with the Negro institutions, operating costs have increased sharply, enrollments have grown. Well-to-do philanthropically minded individuals, while by no means nonexistent, are less numerous than before. A multiplicity of campaigns brings dismay to the college president contemplating his own appeal for voluntary contributions. And now the whole problem is made more immediate by trends toward government aid for private as well as state and municipal institutions.

In this situation, college administrators and trustees have considered the possibilities of cooperative appeals. Even the President's Commission on Higher Education concluded that if the smaller colleges are to continue to exist and to grow, they must come to some kind of cooperative fund raising program, much like the United Negro College Fund.

The idea of a great educational community chest is an intriguing one. The apparent simplicity of this solution of the colleges' need, however, may well in itself lead one to approach the suggestion with some wariness. The problems involved in pooling

the fund raising resources of a group of colleges—developing a case reasonably acceptable to all participants, building complex lists, finding a suitable distribution formula for the money raised—are perplexing but by no means insuperable tasks. The difficulties lie deeper. We judge that only under certain special conditions can colleges cooperate in fund raising, paramount of which are these:

First, the participants must have a common problem that is of public interest.

Second, there must be strong compulsion to federate. Each institution must not only require funds but also lack the necessary resources to obtain this money through its own efforts. To bring colleges together merely because they all need money will not work. When a college has substantial permanent funds and powerful alumni, there will not be sufficient incentive to pool its resources in spirit as well as in letter or to swing the loyalty and support of its graduates to the larger project.

Third, inasmuch as the purpose of federating is to create a new constituency, such as business corporations which would not otherwise give to the single college, the federating group must be able to offer the contributor immunity from individual college appeals. Therefore, practically all institutions in the field must federate, or certainly all of them in an extensive functional or geographical division.

Finally, it must be remembered that there is no magic in federation that will bring success without strong leadership and sound organization for reaching the prospective contributor.

Perhaps the necessary pattern for successful cooperative fund raising will be found in the private medical schools that now contemplate a joint appeal. Here are institutions in a well defined field, generally lacking substantial endowment reserves and with but small, dispersed graduate bodies. They can come together, bound by a common professional service to the nation, uninhibited by fears of weakening alumni loyalties or of the strong institutions being called upon to carry the weak.

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## FEATURE ARTICLES

Can Colleges Cooperate on Fund Raising?.....	Op. 1
PAUL FRANKLIN	
Plan Your Budget Spadework Now.....	4
H. A. BORK	
Salary Trends in 352 Colleges.....	6
WILLIAM J. ENGLISH	
Is Now the Time to Build?.....	7
Inventory Control in a University Bookstore.....	8
W. A. BAUDE	
Endowments and the Equitable Doctrine of Cy Pres.....	11
T. E. BLACKWELL	
Student Health Service at University of California.....	12
WM. GOODRICKE DONALD, M.D.	
Five Buildings in One for Geology Work at Oklahoma.....	15
WALTER T. and ROBERT W. VAHLBERG	
Small College Union Building.....	20
FRED VAN WAGENINGEN	
Ohio University's Natatorium.....	22
L. F. LAUSCHE	
Hollins College Provides a Fine Arts Annex.....	24
WILLARD N. JAMES	
Labor Saving Equipment Cuts Operating Costs.....	27
J. J. WENNER	
Better Food Cost Control — Part II.....	30
WENDELL G. MORGAN	
We Use Student Labor.....	32
CHRISTINE RICKER	

LOOKING FORWARD .....	3
QUESTIONS AND ANSWERS.....	34
NEWS OF THE MONTH.....	35
NAMES IN THE NEWS.....	40
DIRECTORY OF ASSOCIATIONS.....	40
WHAT'S NEW .....	76
WANT ADVERTISEMENTS .....	79



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## Among the Authors



H. A. Bork

HERBERT A. BORK, comptroller of the Oregon State System of Higher Education at Corvallis, calls attention on page 4 to the advance planning that should go into budget preparation for the next few years. An authority in university accounting, he is often called upon as a private consultant on institutional surveys. Before moving to the Pacific Northwest, he had been on the business administrative staff of the University of Wisconsin and was comptroller of that institution when he left. He is much interested in promoting intersectional meetings of college business officer associations in the interest of promoting institutional efficiency and fellowship. His hobbies are salmon fishing and camping in the mountains.



W. J. English

WILLIAM J. ENGLISH, treasurer of Miami University at Oxford, Ohio, since September 1, summarizes on page 6 the result of the survey conducted by the Central Association of College and University Business Officers for the purpose of determining enrollment and salary trends. He continues the work which, for the last three years, had been conducted by Charles W. Hoff, finance secretary of the University of Omaha. Mr. English was business manager of the Galesburg division of the University of Illinois for three and a half years. . . . WALTER A. BAUDE, professor of statistics and director of the university bookstore, University of Cincinnati, applies the scientific approach to the inventory control problem and describes his technics on page 8. The bookstore is a business trust controlled by three faculty members, with the students of the university as the beneficiaries.



J. J. Wenner

JAMES J. WENNER, assistant superintendent of buildings and grounds at the University of Cincinnati, has been much intrigued with the developing of labor saving equipment for campus use. On page 27 he describes some interesting types of equipment that have been developed on his campus that have proved successful. Mr. Wenner was an industrial plant engineer before accepting his present position. After working hours he can be found either in his home workshop or indulging his taste for art and music. . . . DR. WILLIAM GOODRICKE DONALD, physician for the University of California at Berkeley, has been a member of its staff since 1923. He is director of the E. V. Cowell Memorial Hospital on the university campus and describes its work on page 13. As a hobby, he grows camellias. When requested to send his photo for this column, he replied in the following vein: "When Sir Harry Layard inquired after the population and industries of Mosul, the Wahdi replied: 'My illustrious friend and joy of my liver, the thing you ask of me is both difficult and useless. I have passed all my days in this place and I have neither counted the houses nor inquired into the number of its inhabitants, and as to what one person loads on his mules and the other stows in his ships, that is no business of mine. . . . O, my soul! O, my lamb: Seek not after the things that concern thee not. Thou camest unto us and we welcomed thee. Go in peace.'"



# Looking Forward

## Closed Mind

IT IS ANNOYING TO NOTE THE FREQUENCY WITH which the statement "Our institution isn't big enough to make possible the use of staff and equipment in the solution of our problems the way big universities can do" goes unchallenged in conferences and conventions of college administrators.

Actually, the smaller institution has more in its favor in establishing efficient procedures. It lacks the sprawling size that lends itself to being fouled up in red tape. It is only when a small college has a "little" man, in his grasp of the institution's objectives, that such a college is headed for trouble.

If small college administrators would study carefully the reports and speeches of their colleagues in large institutions they would often discover the only change needed in utilizing a technic is some skill in adaptation. The same can be true of the administrator of a large institution. A small college can teach him a lot in efficient operation if he can get away from the idea that bigness implies "better." He may just be making "bigger" mistakes!

## Proper Perspective

THE PROBLEM OF TOLERATING STUDENTS IS THE MOST difficult part of operating a college, someone has said. Students seem to upset the best laid plans of administrators, and yet no way has been found to operate a college without them. In some respects the situation is analogous to the practice of operating a hospital for the professional staff instead of the patients. But here, again, a hospital without patients is an anomaly.

Student attitudes and opinions are not often taken into consideration in making administrative decisions. It is easier to take the point of view that we know what needs to be done and what is the best policy to follow and to ignore the student repercussions that may follow a change of administrative policy. The student becomes a pawn, moved around the board with administrative abandon.

That way of running a college gets the job done with the least amount of waste motion, but it soon develops to the point at which the college operates chiefly to satisfy the administrator. This is hardly the way to encour-

age loyalty to Alma Mater. Do you suppose there is any correlation between this attitude and the fact that a large percentage of alumni never contribute financial aid for the work of the college from which they were graduated?

Proper perspective on the part of college administrators will avoid some of this difficulty. It is not necessary that a college executive abrogate his responsibilities, but it does mean that his decisions should be "student centered" as well as "institution centered" in motivation.

## Staff Junkets

NO BUDGET IS MORE OFTEN ABUSED THAN IS THE travel budget for staff members. For the same person to attend most of the meetings constitutes an extravagance.

This is not to say that most meetings are unnecessary, although undoubtedly many are. Little study has been given to convention attendance in order that an institutional policy may be established as to "who should go to what meeting." Conventions and conferences cost time and money; evidence is needed that delegates honestly can report value received.

It is important for the professional growth of a staff member that he or she get a chance to swap experiences with those in other institutions. This is an extra dividend that cannot be procured by staying on the job on the home campus. The fact that this man is left at home while the department head gets the call is a major obstacle to his professional advancement.

One college executive suggests that perhaps the solution lies in holding "a meeting to end all meetings." The meeting would be so programmed that the interests of college presidents, business managers, purchasing agents, food service directors, managers of residence halls, physical plant administrators, and college union and personnel directors would be properly served. It would denude the campus of administrative personnel—but perhaps the students and faculty could survive one week of it. The same idea might hold for faculty trips, too.

Most of the abuses of the travel budget might be corrected if time were taken intelligently to plan a policy on convention travel. Conceived out of study of staff needs and of the money available, such policy ought to bring sense into what is often a confusing situation.

# PLAN YOUR BUDGET SPADEWORK NOW

*to see you through the next ten years*

WITH THE CREST OF THE VETERAN enrollment having passed and the likelihood that lower collegiate attendance levels will prevail for several years, it is natural for business officers to think about short-term stabilization rather than to envision budgetary needs over a longer period of time. It is a wise administrator who now will arrange the financial cards that he plans on playing over the next 10 years. The lack of a long-term budget course will surely again catch us unprepared as in the 1930's and after the last war.

Most of us have experienced crests and succeeding troughs in enrollment. Let's see what lies beyond the trough now visible.

## FORECASTS FUTURE ENROLLMENT

The President's commission has reported that for all universities and colleges the enrollment in 1940 was about 1,500,000 and in 1947 about 2,400,000, and it forecasts that by 1960 the enrollment will range somewhere between 3,000,000 and 4,600,000. It is conservative, therefore, to plan on an enrollment in 1960 at a level that will be 25 per cent higher than it was in 1947. The commission believes that probably all of the expected increase will need to be taken care of by tax supported institutions rather than by private institutions.

Educational administrators are fully cognizant of the fact that the providing of monies in the future for higher education requires well arranged planning. Most of the published material has dealt with the implications of problems from the standpoint of the nation as a whole, but there have been several important contributions thoroughly analyzing contemplated local developments not only in terms of the productive load to be carried and the quality thereof but also with regard to the means of financing.

The most important factor deter-

From an address at the joint meeting of the Central and Western Associations of College and University Business Officers, Denver, 1949.

**H. A. BORK**  
Comptroller, Oregon State System  
of Higher Education

mining collegiate attendance is the number of youths in the age bracket of 18 to 21 years, inclusive. Except where an institution limits its enrollment, a forecast year by year of the expected population of the age group for the state in which the institution is located is basic to the problem. A qualified sociologist or statistician should be called in to do the predicting.

We all know that for the country as a whole there was a downward trend in marriages between 1926 and 1932, and that as a result, barring an abnormal war situation, we probably would have experienced a decrease in collegiate enrollment from about 1944 to 1953. Marriages zoomed upward between 1940 and 1946. It is probable, therefore, that between 1958 and 1967 higher education enrollments will rise sharply and surpass previous peaks. In addition to the birth rate factor, an important consideration is the unprecedented migration of families, in recent years, especially to the West. Within any given state the attendance



situation may differ materially from the picture just indicated.

After determining the size of the reservoir of youths aged 18 through 21, it is then essential to ascertain the per cent and number who are likely to go to college. For 1940 the per cent of the population between the ages of 18 and 21 attending college averaged about 15 per cent for the nation, with a range from 10 per cent for the

South Central region to about 25 per cent for the Pacific Coast region. Moreover, there is quite a range of attendance within a region. For the Pacific Coast the Oregon and Washington figures were 22 per cent, and that of California was 27 per cent.

Consideration also will need to be given to contemplated expansion into new fields of instruction. For example, it seems inevitable that publicly supported institutions will need to offer instruction to a larger number of students than heretofore in the fields of medicine, dentistry and elementary teacher training. Advance planning needs likewise to be given to the development of such activities as adult education, agricultural and other research, and activities allied to instruction, such as for the expansion or building of hospitals for medical school instruction.

## FOLLOW UP GRADUATES

It seems now that the engineering colleges' output is at a level at which the number of graduates will be such that the maximum use will not be made of the technical training they received. Studies should be initiated to follow up graduates of an institution continuously to determine whether or not they are engaging successfully in fields of employment for which they were trained, especially in professional fields. If the facts indicate that the institutional efforts are not successful, then a reappraisal should be made to determine whether the quality of the training of its product is below normal or whether there is an unbalanced situation between the number of students being turned out for the field and the demand therefor. Recognition should be given to shifting economies of a state involving, for example, a transition from emphasis on forestry or agriculture to that on industry and business.

Contemplated qualitative changes in output should be listed and carefully considered. Plant and equipment facilities may be inadequate. The quality



of instruction may be below par because of an inadequate size of staff or because the staff lacks in teaching ability.

#### FUNDS REQUIRED

Future output changes involving both capital and operation requirements need to be converted into terms of dollars and cents of cost.

Exhaustive studies need to be made of the facilities that the institution now has available, the effectiveness of their use, and then the additional increments of buildings needed with additional increments in student enrollment should be determined. Estimates of additional requirements for new buildings should also provide for utility services, such as heat and power plants, and for their proper equipment.

The President's commission has indicated that, for purposes of rough approximation, about 155 square feet of floor area per student is required for educational and general purposes. The cost per square foot in a community can be determined readily. In addition, provision needs to be made for auxiliary buildings, such as residence and dining halls and apartments.

The forecast of requirements for added buildings requires also a planning for campus expansion and land acquisition. There should be a formal adoption by the governing board of an institution of a plan showing the proposed expansion of the campus with an understanding that favorable purchase opportunities, as they occur, will be presented to the board. It is good economy to provide in each annual budget for land acquisitions, not necessarily limited to the purchase of parcels that will be needed within a year or two. The cost of land which is purchased on a long-term basis, well in advance of actual need in connection with the erection of a particular building, in most cases will be more favorable than that of land purchased when the owner knows it is desperately needed.

In some states, as in California, it may be more practical, desirable and economical to establish branches to existing institutions than to expand existing campuses. In many cases, it may be wise to plan for expanded needs through the establishment of new institutions.

Expected budget requirements for operating purposes can be readily compiled. For example, reasonably accurate estimates can be prepared,

indicating the full-time equivalent of staff needed both for teaching and for nonteaching positions, and the funds required based upon present pay levels. When there is significant expansion into a new field of work, such as in the field of medicine, or when there is to be greater emphasis upon graduate work, more exact estimates will need to be compiled since higher than average outlays will be required for work in these fields.

In the next few years, although enrollments will decrease slightly, there probably will be need for additional staff members resulting from large freshman and sophomore classes moving into upper division and graduate work.

Provision needs also to be made for added funds required to operate new and existing buildings.

In all estimates of funds required for future planning, it is essential that the compilations be made in such a way and so presented as to show both the units of requirements and the cost thereof. The future requirements in terms of budgetary dollars should be readily determinable at any time in the light of the price index prevailing at that time. For example, a tabulation of building needs should show the square feet of floor space, the cubage, and also the type of construction. For the anticipated requirements of funds for compensation of employees, there should be shown the average pay rate now being granted for both academic employees and nonacademic employees. As prices change, often rather suddenly, revised estimates of financial requirements can be readily recalculated.

#### WHERE FUNDS COME FROM

Before the war, for all higher educational institutions about one-third of the educational and general funds were obtained from fees and tuition, one-third from state and local governmental units, and one-third from all other sources. This distribution, of course, differs materially between privately and publicly supported institutions and also between individual institutions in each category.

Privately established institutions, prior to the war, obtained about 53 per cent of educational and general income from fees and tuition, about 36 per cent from gifts, and about 11 per cent from other sources. The President's commission is of the

opinion that increased annual amounts of income to be obtained in the future from fees and donations probably will be required to continue service to a student body of close to 900,000 as at present and will not permit the training of a larger enrollment. It is possible that the indispensable service of private institutions may be more appreciatively recognized by grants of tax funds.

In the case of publicly controlled higher education, before the war about 70 per cent of the educational and general budget requirements were financed from state and local governmental sources, about 20 per cent from fees and tuition, and about 10 per cent from other sources. For elementary and high school education, though, about 85 per cent of support was obtained from public funds.

With the increasing recognition being granted to the social importance of collegiate training and emphasis upon the value of such training to society rather than upon the benefits to the particular student, it is reasonable to suppose that public tax bodies should provide a larger portion of the cost of providing collegiate instruction. It also follows that if a larger proportion of youths from 18 to 21, inclusive, is to be granted college instruction, added support will be required not only for educational and general purposes but also for scholarships and fellowships to assist needy students in meeting their expenses for board and room.

Capital needs for publicly supported institutions are usually financed from tax funds. To a smaller extent, financing is made possible through the assessment and collection of a compulsory student building fee. Borrowing of funds for construction purposes is usually limited to student service buildings, such as residence halls, union buildings, and health services, with debt service secured by a pledge of income obtained from the operation of such buildings.

In summary, a budget projection year by year for a 10 year period, without unnecessary details, will act as an indispensable guide to governing boards and administrators. For public institutions such a plan considered with appropriating bodies will help shape fiscal and tax policies to permit the development of a well balanced program for higher education.



# SALARY TRENDS IN 352 COLLEGES

COLLEGE AND UNIVERSITY SALARIES for faculty and administrative staff have increased an average of 50.1 per cent since 1940-41. An increase of 7.2 per cent is shown for 1948-49 over 1947-48. This is indicated in a survey in which 352 business officers took part.

Office and clerical staffs in our colleges and universities have had salary increases which average 51.7 per cent over 1940-41, and 8.6 per cent over 1947-48. Custodial and maintenance employees have received an average increase in all schools of 59.7 per cent over 1940-41. A general increase of 8.6 per cent is indicated this year over 1947-48.

Business officers have estimated that an anticipated increase for 1949-50 may be expected for faculty and administrative staffs of 5.1 per cent; for office and clerical staff of 3.8 per cent, and custodial and maintenance employees, of 3.2 per cent.

Institutions have effected an increase in compensation not only by increasing the gross rate but also by reducing the basic period of service. Mechanisms noted are (1) "bonus" commensurate with cost of living index, (2) reduction from 12 to nine months' service, and (3) reduction from a 44 to a 40 hour week.

## SALARY SCALES

College and university faculty of instructor's rank receive for the nine months' service of the academic year a median salary of \$2839; for 12 months' service, an annual median salary of \$3264. The range for instructors for nine months' service extends from \$1300 to \$7000; for 12 months' service, \$1200 to \$7000.

Assistant professors show a median of \$3437 for nine months' service in a range of \$1800 to \$9000; for 12

Comments accompanying statistical tables prepared for joint meeting of the Central and Western Associations of College and University Business Officers, June 1949.

## WILLIAM J. ENGLISH

Treasurer, Miami University  
Oxford, Ohio

months' service, a median of \$3972 in a range of \$2140 to \$8000.

Associate professors indicate a median of \$3900 for nine months' service in a range of \$1890 to \$9000 and average \$4500 for twelve months' service in a range of \$2400 to \$10,500.

Full professors (including department heads) have a reported median for nine months' service of \$4500 within a range of \$2100 to \$14,000; for 12 months' service, a median of \$5231 within a range of \$2500 to \$17,000.

The annual salaries of deans and directors have a wide variation. It should be specifically noted that most



of the maximums without exception are cases of professional colleges and schools. The general median of all schools reporting indicated a median annual salary of deans and directors to be \$5000 and \$5784 for nine and 12 months' service, respectively.

Major administrative officers (other than deans) indicate likewise a wide variation, such variation depending upon institutional emphasis. To a lesser degree, salaries of administrative assistants vary widely in our colleges, but it is interesting to note that this group of individuals, whose importance has increased with institutional growth and who are directly responsible for an institution's efficient operation, seems to have attained recognition.

Accountants, in general, receive a median annual salary of \$3000 in a range extending from \$1200 to \$9350. Librarians receive a median annual salary of \$3143 within a range of \$1140 to \$8500. Secretarial, stenographic and clerical employees are represented by a median annual salary of \$1980 within a range of \$1020 to \$4800.

Superintendents and engineers receive a median monthly wage of \$280; craftsmen, such as painters, electricians and carpenters, \$215; groundsmen, \$167, and janitors and charwomen, \$145.

The survey also indicates that the enrollment of our institutions of higher learning has definitely reached a plateau, and the once ascending curve has turned toward horizontal. The slight decrease indicated for 1949-50 (0.1 per cent) indicates a decline of the mean curve. Veteran enrollment has shown a decline earlier and more sharply; this was probably to be expected. Five years have elapsed since Public Law 346 became effective; thus, veterans' entitlement has been considerably reduced. This does not mean that when a veteran's entitlement under the G.I. bill has been used that he is lost as an enrollee. He may continue, providing his own financial support.

Factors offering to reduce this sharpness of veteran enrollment decline may arise from legislation. Federal aid to colleges, or so-called bonus enactments, may be specific examples. Such effect would seem to be temporary in reducing the decline, however. Inevitably, veteran enrollment, as we know it under Public Laws 346 and 16, will diminish. It is possible then that college enrollments will continue in a gradual decline until the "war babies" reach college age. Should there be a general economic decline, it is possible that total collegiate enrollment will decline more gently; veterans would then strive to obtain maxi-

num entitlement within the limitation of Public Law 346.

#### COMMENTS

Thus, in 1949, as compared with 1940-41, we note that enrollments have increased 79.8 per cent; faculty salaries, 50.1 per cent; custodial and maintenance wages, 59.7, and stenographic and clerical, 51.7 per cent. These increases, however, have not kept pace with the cost of living change. With January 1939 as 100, March 1949 cost of living index showed 161.3,<sup>1</sup> and with January 1936 as base, the All Commodity Price In-

dex shows for March 1949, 158.4.<sup>2</sup> Similarly, the purchasing power of the dollar with January 1939 base had fallen to 63.1<sup>3</sup> in March 1949. The 1949-50 prospects as reported by our business officers seem to be optimistic in that a 4 per cent average increase is indicated.

Business officers should take inventory of their own schools and of the services they render. They should reflect and study comparable college programs, wherever possible. In the last five years, they have continuously fought increased volumes and increased report requirements, as well

as rapidly changing academic patterns. Their adeptness and originality have been thoroughly tested by new and swiftly moving programs. Now, by critical analysis, they should evaluate their individual college problems and offer to the board and president sound recommendations. Above all, they should be prepared with planned alternatives to cover any anticipated extreme. This is a bold era for bold thought, if not bold action!

<sup>1</sup>Industrial Conference Board Economic Almanac, 1949.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

## IS NOW THE TIME TO BUILD?

### *Building survey reveals brisk activity among colleges*

IN ORDER THAT COLLEGE AND UNIVERSITY administrators may determine their building programs in comparison with the experience of other institutions, COLLEGE AND UNIVERSITY BUSINESS is initiating a Survey on College Building Costs. This report, or box score summary, will be published at intervals.

Readers will find that this comparative study will help them evaluate the current construction market and may enable them to make a logical decision as to the timing of their own construction program in view of the costs reported by various institutions.

It is recognized that regional differences may influence construction

costs, particularly in regard to labor costs and to shipping costs of construction materials. With those variables in mind, however, it is reasonable to assume that the figures may be such as will serve the interests of higher education. In most cases the costs reported do not include the architects' fees or the cost of land.

### Survey of Building Costs Conducted by College and University Business

College	Function	Type Construction	Total Cost	Total Cubage	Cu. Ft. Cost	Contract Cost for				Approximate Wage Rate					Date of Contract Award (1949)
						General Construction	Heating	Plumbing	Electrical	Electricians	Bricklayers	Masons	Plumbers	Carpenters	
Northwestern Univ.	Dorm. Commons	Reinforced concrete	\$1,186,623 (Est.)	763,580	\$1.55	\$1,017,276	\$44,947	\$71,000	\$53,500	\$2.52½	\$2.40	\$2.40	\$2.45	\$2.45	June
Mississippi	Auditorium, Classrooms, Student Activity	Steel, tile, brick	265,222	26,900*	9.85*	251,000	6,215	6,215	8,007	Do not know.					May
Va. Fisheries Lab.	Marine Lab.	Cinderblock	157,000	81,800	1.92	70,585	22,330	22,330	7,875	2.00	2.50		2.25	1.75	Sept.
Univ. of Ky.	Service Bldg.	Concrete, frame brick & tile walls	800,000	1,775,000	0.45	643,731	46,000	41,129	38,140	2.12½	2.50	2.50	2.25	2.00	May
Vanderbilt Univ.	Dormitory	Reinforced slab with brick & masonry walls	517,000	355,000	1.45	422,797	61,911	61,911	32,292	2.12½	2.50	2.50	1.80	1.80	Oct.
"	Eng. Bldg.	"	560,000	1,130,000	0.50	430,745	60,044	60,044	69,211	2.12½	2.50	2.50	1.80	1.80	Aug.
Univ. of N. D.	Union	Brick, concrete	517,792	625,000	0.82	389,900	61,713	61,713	36,975	2.21	2.25	2.25	2.00	1.77½	July
Kansas State	Field House, Men's Gym	Steel, concrete & stone	1,641,846	5,116,580	0.32	1,465,981	136,242	136,242	39,823	1.50	2.50	2.75	2.00	1.75	March
"	Girls' Dorm.	Reinforced concrete, stone	663,068	745,229	0.88	545,513	67,063	67,063	30,490	1.50	2.50	2.75	2.00	1.75	July
Univ. of Tulsa	Girls' Dorm.	Reinforced concrete, stone	375,000	350,000	1.07	310,000	50,000	50,800	15,000	2.40	3.00	3.00	2.45	2.25	1948
"	Men's Dorm.	"	"	"	"	"	50,000	50,000	15,000	2.40	3.00	3.00	2.45	2.25	1948
"	Science Bldg.	"	750,000	800,000	0.93	615,000	80,000	80,000	55,000	2.40	3.00	3.00	2.45	2.25	June
"	Activities Bldg.	"	500,000	500,000	1.00	375,000	95,000	95,000	30,000	2.40	3.00	3.00	2.45	2.25	Aug.

\*Per square foot.

# INVENTORY CONTROL

system for a university

## BOOKSTORE

W. A. BAUDE

Professor of Statistics  
University of Cincinnati

AN UNUSUAL PERSONNEL SITUATION is responsible for the use and development of inventory control methods in the bookstore of the University of Cincinnati. This university was the pioneer in the development of co-operative courses in engineering. At the present time, the bookstore not only is providing the necessary services of supplying the student body but also is carrying out a training program for students registered in the college of business administration.

The students fill positions beginning with the classification of stock boy to that of student manager. Supervision is supplied by two faculty men known as the director and the controller. There are 18 permanent student positions, 14 of these being filled by pairs of "coops" (28 students), and four by students on a split-section basis. On a split-section basis the student attends school half of the day and works at the bookstore the other half.

The period of alternation for the coops is eight weeks, which means that at section changes 14 students who have been at school appear for work to relieve the 14 who will start their school period. Obviously, for successful operation of the bookstore, systems of controls and of records are vital. It is not a matter of relative merits but of absolute necessity.

The term "inventory control" naturally implies the accountability of value of the commodities passing through a business enterprise. But an inventory system can supplement the following functions of a retail merchandising establishment, namely:

A. Selling—the control aiding in locating and pricing merchandise.

B. Purchasing—establishment of maximum and minimum inventories, also the quantities for routine buying.

C. Inventory Analysis—periodic inventories, either actual or calculated, locating active and dead merchandise,

shortages, turnover rates, and so forth.

D. Accounting Control—determination of effectiveness of new methods tried or the detection of unfavorable tendencies within a relatively short period of time.

If the efficiency of these functions can be increased, management will experience a simplification of its problems and a general improvement in over-all operations.

### INVENTORY CLASSIFICATIONS

Any division of the merchandise inventory into classifications is purely arbitrary, but there are certain natural separations. Since cash registers are a necessary component of the control system, the number of inventory classifications will be determined by the number of registers in the machines bought. When the system was introduced, it was decided that one large cash register to include all classifications should be used and this was to be supplemented by smaller machines for use in specialized sections of the store.

The large machine contains 17 registers, and the inventory is presently broken down into the following classifications: (1) trade books\*; (2) stationery (includes all paper items); (3) fountain pens\*; (4) athletic equipment\*; (5) pennants; (6) drawing sets\*; (7) scientific equipment\*; (8) supplies; (9) books\*; (10) candy; (11) tobacco; (12) jewelry\*; (13) leather goods\*; (14) mark-down goods; (15) sales tax; (16) employe purchases (used when accommodations purchases are made for employes), and (17) items assignable for special purposes.

### UNIT IDENTIFICATION

Currently, only three types of identifying media are being used. Figure 1 shows the card used for controlling trade books and textbooks. The face of the card contains the author's name, the title of the book, the inventory classification, the location on the shelves of the book sections, and various price data. This is all printed on the card by means of a duplicating machine at the time the books are received. One card is prepared for each copy of the book to be sold. Also,

\*All units included in the classifications marked with an asterisk are individually controlled. Items included in the other classifications may or may not be controlled individually. At present, any article having a selling price of \$2 or more is felt to warrant special control.

Fig. 1: Card used for controlling trade books and textbooks.



[illegible]

the edges of the card are gang-punched according to a code for the author's name. The cards are placed, alphabetically arranged, according to the author's name in a drawer file in the book section of the store. A perforated tag is used for unit control of fountain pens, drawing sets, scientific equipment, jewelry and leather goods. The necessary identifying information is recorded manually on such tags. A pin tag is used on athletic goods and cloth pennants.

## CONTROL EQUIPMENT

In addition to cash registers, adding machines, an automatic calculator, stock record books, the specialized equipment consists of a "typewriter-accounting-computing-machine" and a "typewriter-accounting-statistical-machine."

The type of record sheet kept by the office is shown in Figure 2. This sheet can be used either for books or for other merchandise items. Each horizontal line is sufficient to record the data for any one week of operation.

## AIDS TO SELLING

A recent count of titles of textbooks sold at our bookstore indicated that approximately 1000 titles were available for sale at the time of the September rush. Regular clerks learn the locations of individual titles well enough to service sales satisfactorily. However, the selling of textbooks turns out to be such a routine job that during the rush periods it is unwise to sacrifice the experience and knowledge of regular employees on such tasks, and it is better to use temporary clerks as far as possible.

Within a short time an inexperienced clerk can be taught to serve a customer by asking him the author and title of textbooks desired. All the clerk need do is to locate a card in the file, and he has complete informa-

tion to consummate the sale. He can readily find the book and can ring the register correctly for the sale. The control card is dropped in a box below the cash register for further use and control. A daily check is run by an office clerk on the dollar amount of the cards (determined on the calculator) to be compared to the total amount of dollar sales on cash registers for classification 9 (books).

Likewise, the other control tags provide price information and indicate that some unit of merchandise has been sold. Also, in all inventory classifications that are completely controlled, the dollar value of tags should equal the total of registers. Errors of "overringing" in one classification may rectify the errors of "under-ringing" in another classification. The adjustment is made on the cash register tape before being turned over to the bookkeeper. Thus, the system aids selling by locating merchandise, providing price information, and controlling sales figures of registers.

## AIDS TO PURCHASING

Since many of the items in a college bookstore are of a standard quality or trademark, a considerable volume of the purchasing can be routine. Each merchandise item, except books, is analyzed as to minimum inventory requirements. This figure is based upon the ability to replenish stock from known suppliers. Ordinarily, this minimum represents a three weeks' supply of sales. Items having seasonal sales require special attention but can be easily noted in some manner. The maximum inventory figure is the minimum plus the amount of an order of economic size. However, annual contracts with scheduled shipment dates have been made when price and storage space suggested such a procedure.

The basic requirement for such rou-

time practice is the possession of current "on hand" figures. The daily posting of unit inventory reductions in items by means of the control tags dropped from units sold provides the perpetual inventory figures needed. Frequent physical inventories verify these records and keep the system in control.

For merchandise not controlled by unit as found in classifications 2 and 8 (stationery and supplies), separate records are kept for the inventories in the bookstore and the stockroom. Then, for example, as a carton of India ink is moved from the stockroom to the store, a record is made on the transfer sheet kept by the stock clerk. The perpetual inventory figure of the stockroom controls the routine purchasing of such merchandise. The carbon copy of orders sent to suppliers is attached to the inventory sheet in the stock record book and remains there until the merchandise is received. Thus, the two stock clerks are aware of each order placed.

A more detailed system of placing book orders and checking on "remainders" is used but will not be described here. Books warrant special attention because there is nothing deader than an unsold copy of a discontinued textbook not returnable to the publisher.

## INVENTORY ANALYSIS

The two-week cycle for physical inventories is as follows:

	First Week	Second Week
Mon.	Scientific equipment	Drawing equipment
Tues.	Jewelry	Jewelry
Wed.	Fountain pens	Fountain pens
Thurs.	Tobacco, mark-down goods	Tobacco
Fri.	Candy, athletic goods	Candy, leather goods
Sat.	Pennants	Trade books

In addition, the physical inventories of the classifications 2, 8 and 9 (stationery, supplies and books) are taken during the holiday periods.

The location of dead merchandise is too easy to warrant discussion. Likewise, the calculation of turnover rates is too well known to merit more comment than that more frequent inventory figures are available.

The retail method is used for the determination of inventory shortages and overages. In making the analysis, all transactions involving inventory changes, such as purchases, purchase returns, and transfer to and from the Medic Branch, must be calculated at retail in addition to the figures at cost. Such retail figures for each type of transaction are accumulated on special sheets for the periods between inventory counts. Different colored sheets are used for the various types of transactions.

Fundamentally, the operating rule is that a beginning inventory plus all additions, less all reductions, should be the ending inventory. Any difference between such a calculated inventory and the retail value of the physical inventory may be the cause for an investigation. Thus:

INVENTORY RECAPITULATION (All figures at retail)	
Beginning inventory.....	\$1000
Purchases.....	800
	<hr/> \$1800
Transfers to Medic Branch....	500
	<hr/> \$1300
Purchase returns.....	200
	<hr/> \$1100
Sales.....	490
	<hr/> \$610
Sales discounts* .....	10
Calculated ending inventory..	\$600

\*A sales discount slip must be filled out whenever any merchandise is sold at a price less than its stated retail value.

Therefore, a retail value for the physical inventory, of say, \$590, would certainly warrant the student manager's requesting a check of the records or starting some sort of investigation. Many years ago, a series of unexplained shortages in the tobacco classification disclosed the fact that a custodian had been helping himself to merchandise during his cleaning period. All employees are given the privilege of buying merchandise at inven-

tory cost (transportation not included) to reduce the temptation of taking stock.

Perfection in results is not attained, as is disclosed by the accumulation of an over-and-short figure kept by the director. But the percentage of loss is small, and it is felt that the system cannot help but have a restraining influence upon dishonest tactics. It takes more than this system to catch a real thief in the organization or to prevent shoplifting, although the presence of resulting losses will be indicated by the system.

The problem of obsolete merchandise is handled by transfer to classification 14 (mark-down goods) at the time of the physical inventory so that such goods will not vitiate results of inventories calculated as described in the following section.

#### ACCOUNTING CONTROL

A statement of profit and loss is the best measure of the effectiveness of current operations. The reason more frequent statements are not made is the difficulty of determining an inventory figure to be used on the accounting work sheets.

The same retail method that was used to carry out the inventory recapitulation can be used for the determination of an inventory figure as of any date required. For example, in the inventory recapitulation previously illustrated, an inventory valuation at a point intermediate between the two physical inventories is required. For purposes of illustration, let us assume that all transactions were just half of the total period.

INVENTORY CALCULATION (See Figure 7 for form used)		
	Cost	Retail
Beginning inventory.....	\$ 800	\$1000
Purchases.....	320	400
	<hr/> \$1120	<hr/> \$1400
Transfers out.....	200	250
	<hr/> \$ 920	<hr/> \$1150
Purchase returns.....	80	100
	<hr/> \$ 840	<hr/> \$1050
Sales.....		245
		<hr/> \$ 805
Sales discounts.....		5
Calculated inventory as of date...	\$ 800	

The ratio of the cost to the retail value for the totals, after all transactions except sales and sales discounts

have been included, is assumed to be the measure of the cost percentage of the inventory at the time involved. Thus:

$$\frac{\text{Cost}}{\text{Retail}} = \frac{\$ 840}{\$1050} = \$0.80$$

The calculated inventory at cost of the classification would be

$$\$800 \times \$0.80 = \$640$$

The validity of the assumption rests upon the constancy of the ratio figure. Following is a list for the ratio of the stationery inventory for a 20 week period in 1949:

Feb. 19 0.5956	Apr. 30 0.6033
26 0.5956	May 7 0.6039
Mar. 5 0.5978	14 0.6044
12 0.5986	21 0.6038
19 0.6008	28 0.5938
26 0.6012	June 4 0.5959
Apr. 2 0.6065	11 0.5971
9 0.6039	18 0.5985
16 0.6026	25 0.6017
23 0.6025	July 1 0.6014

The total inventory at cost is the sum of all classifications, either physical or calculated, as of a particular date.

The current practice at our bookstore is to determine an inventory figure as of the close of business of each Saturday. Except in the cases of an actual inventory of the very large classifications, it is possible to have a work sheet figure for operations by the following Wednesday.

#### SUMMARY

The fundamentals of the methods outlined here have been in operation for more than 15 years. Changes have been made in record forms and equipment, but the basic features have remained the same.

Some bookstore managers have inquired about the cost of operating the system. A fair measure of that cost might be the saving in salaries and other expenses if the system were discarded. At the present time, the detailed work is spread over the entire personnel, and only in the case of the bookkeeper could a reduction in time be effected. But the time of supervision by the director and the controller would have to be increased. A comparison of figures of operation with those of stores of similar size yields the definite conclusion that the system does not yield lesser profits even though all textbooks are sold at a 10 per cent discount from list price.

In addition, when special questions of management arise, the present system of records is comprehensive enough that the data are present for an intelligent analysis.



# ENDOWMENTS and the EQUITABLE DOCTRINE of CY PRES



**T. E. BLACKWELL**

Treasurer, Washington University  
St. Louis

ONE TEST OF GOOD COLLEGE ADMINISTRATION is the degree of care with which the restrictions imposed upon the use of gifts and bequests are observed. Not only should the college maintain a carefully indexed document file of all original data pertaining to restricted gifts and bequests, but also it should have available in convenient form a manual of procedure to be consulted frequently by those concerned with the day-by-day administration of such funds.

This manual should contain a concise summary of the history of each restricted fund, with appropriate excerpts from the will or instrument of gift and from the minutes of the governing board of the institution at the time of acceptance.

Experience has shown that, with the lapse of time, it is all too easy to forget or to neglect the details of such restrictions unless they are made conveniently available at the administrative level. Good administration also calls for a detailed and periodic audit of procedures in current use. This check should include a review of statements in the college catalog and other publications with reference to endowments and scholarships. Not infrequently surprising variations will be found between the wording of the original document and that of the published summary.

A reputation for scrupulous and meticulous observance of the requests and restrictions of donors and of testators will do much to increase the financial support of the institution over the years. Better to decline a gift or bequest too burdened with restrictions than to accept it and then fail to live up to its terms.

In England, Parliament found it necessary as early as 1414 to appoint a commission to investigate and to correct notorious misappropriations of

properties given for the support of certain hospitals. Again, in 1601 with the enactment of the Statute of Elizabeth we find Parliament concerned with the same type of problem. In fact, the preamble of this famous statute, the basis of our modern concepts of a charitable trust, recites a long list of instances of mismanagement of charitable endowments and the necessity for review by a commission. Thus, there grew up in England the tradition of supervision of charitable trusts by royal commissions.

## DARTMOUTH COLLEGE CASE

In this country, however, there has been little public supervision of charitable trusts and charitable corporations. In the renowned Dartmouth College case<sup>1</sup> Mr. Justice Story warned that there should exist "somewhere a power to visit, inquire into, and correct all irregularities and abuses in such corporations, and to compel the original purposes of the charity to be faithfully fulfilled." This early dictum did not stimulate extensive legislative action. With the exception of New York and Pennsylvania, our state legislatures have not seen fit to follow the English practice of supervision by commissions.

Our courts, however, have recognized the inherent right of the founder of a charity to review and to inspect his own foundation. They also have recognized his power to delegate this power of visitation upon others. This right to establish a board of visitors as a separate entity is well illustrated in the Andover Theological Seminary case.<sup>2</sup> Here the founder established two corporations, one to conduct the

seminary and the other to maintain a continuous review of the theological instruction offered by the institution.

In 1867, the state of New York established the Board of State Commissioners of Public Charities with broad powers of visitation and inspection of privately endowed institutions. These powers have been fully sustained by the New York courts, despite protests that such supervision imposes a costly and vexatious burden.<sup>3</sup> Pennsylvania established a Board of Public Charities in 1869.

In other jurisdictions, neither the attorney general nor the courts of equity have been given general powers of visitation and inspection. In other words, they do not, as a rule, take judicial notice of maladministration of charitable gifts and endowments until some interested party directs their attention to the problem. Thus, trustees are apparently left largely to the dictates of their own conscience.

Although courts of equity do not have the powers of visitation and supervision of charitable endowments, they do have broad powers to alter and to mold the terms and conditions imposed by the donor if it can be shown that changed conditions render it in the public interest to make such changes.

This equitable power of the court is termed "cy pres," an ancient legal term of Norman-French origin. It has been translated "so nearly as may be." It is not the substitution of the court's arbitrary judgment for that of the donors, but it is based upon the assumption that the court will do only what the donor would have done himself if he had known of the conditions as they now exist.

Thus, if changed conditions render it difficult or impossible to administer a charitable trust in accordance with its original terms, a petition should be filed with the court of equity having jurisdiction over the trust.

<sup>1</sup>Dartmouth College v. Woodward, 4 L. Ed. 629 (1819).

<sup>2</sup>Trustees of Andover Theological Seminary v. Visitors of the Theological Institution in Phillips Academy, 148 N.E. 900 (1925).

<sup>3</sup>New York Juvenile Guardian Society v. Roosevelt, 7 Daly 188 (1877). Newton v. Lewis, 196 N.Y. Supp. 711 (1922).





# STUDENT HEALTH SERVICE

*A project in occupational medicine  
for University of California students*

THE STUDENT HEALTH SERVICE AT the University of California is looked upon by the regents as a reasonable investment made by the state in the education of future citizens and an assurance to the parents of the state that the university is aware of the health of its students.

It is axiomatic that without reasonably good health a young man or woman is seriously handicapped in putting either education or intelligence to effective use. The service is also an educational project in the value of preventive and curative medicine for the lay student.

The student health service at Berkeley is concerned with (1) environmental conditions, (2) the acutely ill, (3) education of the student as to the capabilities of his or her body in relation to physical handicaps, and (4) the exclusion of contagion and the control of epidemics. From the public health view, communicable diseases are excluded by the original examination of the patient, and acutely contagious diseases are controlled by immediate hospitalization and isolation.

The sanitary environment of the campus buildings, including classrooms and other facilities, is controlled with regard to health, safety and optimum utility; also, boarding houses, restaurants and fraternity and sorority houses are inspected and controlled. This is accomplished by a corps of sanitarians under the direction of the university physician, in cooperation with a safety engineer.

By virtue of registering in the university, each student may have consultation and medical and surgical care, when needed, on the campus at Ernest V. Cowell Memorial Hospital. No house calls or residence hall calls are made, since adequate facilities are available at the hospital and adequate transportation is at hand.

Every new student receives a complete entrance physical examination,

**WM. GOODRICKE DONALD, M.D.**

University Physician  
University of California, Berkeley

including x-ray examination of the chest, appropriate laboratory work, audiometer test, visual test, and dental examination. These examinations are made in accord with the United States Army examination for officers, since every physically fit male student in the university is subject to compulsory military officer training. Examiners look for signs of acute or chronic diseases or physical abnormalities which may, under the stress and strain of college life, injure the health of the student or of other students.

Variations from the normal are followed up on appropriate occasions: for example, tuberculosis, every three months if quiescent or if there has been contact or if the x-rays would indicate follow-up. Students with active tuberculosis are sequestered and referred to definitive treatment, so that they may, when they return, not be a menace to public health.

Regular examinations are made of all students having suspicious findings or of other students participating in special activities, such as athletics or professional schools.

Full surgical treatment is included in the service when such treatment is necessary and does not interfere with the student's work. However, in acute emergencies necessary surgery is performed immediately. Elective surgery would defeat the purpose of the health service (to keep the student in classes) were it done during residence; therefore, the desirability of such surgery is pointed out, so that when the student returns to his com-

munity he may have this done during vacation.

All modalities of treatment used are without charge, with the exception of hospitalization for more than 30 days. This includes doctors' care, surgical fees, x-ray examinations, laboratory work, medications, bed care, special nursing, transfusions and any other care necessary for the student's return to classes.

There is available a 200 bed hospital. It consists of a permanent reinforced concrete building providing 100 beds and an outpatient clinic and an east wing of seven wards constructed of insulated steel—a tropical naval hospital adapted to the climate of the San Francisco Bay area. Approximately 200 beds are available immediately, and there are on hand cots, mattresses and blankets so that a total of 430 patients may be taken care of in beds at any time.

The outpatient department and the hospital are available 24 hours a day for emergencies, but the outpatient clinic is regularly open for consultation for both men and women nine hours a day. Over the years an average of 80 per cent of the total student body has availed itself of this service for about 10 visits per student per year. On the average, 10 per cent of the registered student body is hospitalized each year at one time or another.

Acute flare-ups of chronic illnesses are taken care of until it is safe to return the student to his own family and community, but the university takes no further responsibility for



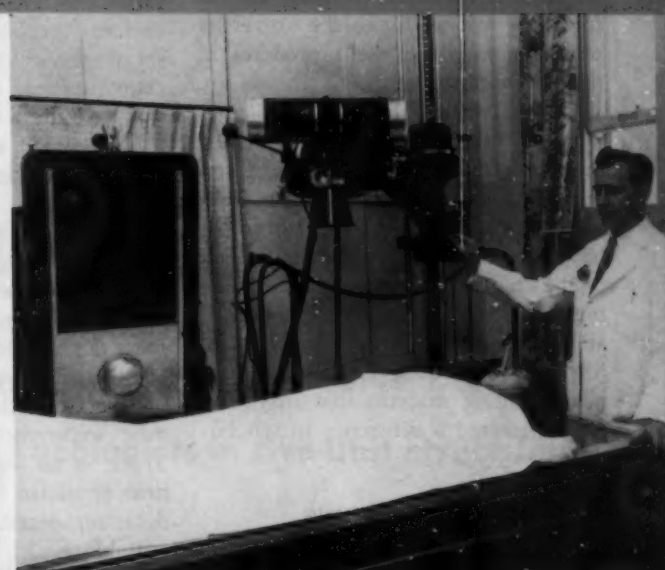
• Ernest V. Cowell Memorial Hospital is on the campus.



• Convalescence is speeded on the hospital's sun porch.



• Draw curtains give some privacy in the two-bed ward.



• Diagnosis often depends upon x-ray examination.



• One of the hospital's four busy laboratories.



• Hospital kitchen, where all the diets are prepared.



chronic physical defects or disabilities present at the time of entrance to the university.

If illnesses are of a nature requiring long and continued care so that the student may not be returned to classes during the current term, or if at the end of a term the patient is still ill, he is released from the hospital to the care of his home or community when it is considered safe to do so.

The administration of the service is as follows: The university physician directs all student health service activities and is responsible to the president of the university, who by order of the regents is specifically charged with the health of the students and the general sanitation and safety of their environments. All heads of the departments, sanitation, outpatient, medicine, surgery and so forth, are responsible to the university physician to direct the procedures in their own departments.

The university physician cooperates with all other representatives of the president, such as deans, advisers and police, for the solution of study problems and personality problems that have a bearing on the whole welfare of the student body. By means of lists regularly sent them, the president's and deans' offices have available information regarding handicaps and illnesses among students that may contribute toward a deficiency in scholarship.

#### **COSTS STUDENTS NOTHING**

There is no health service fee. The cost of the service is borne by the university and in part by the physicians of the community. An incidental fee is charged at the time of registration for expenses, such as library books, laboratory, gymnasium facilities, lockers and medical care, but this service is not an insurance scheme, and service is limited to the staff and facilities available. The care is to be obtained by the student only at the student health service at Cowell Memorial Hospital, and at no other place.

The outpatient clinic, dental department, x-ray department, and administrative offices are located on the first floor of the main building. The hospital beds are located on the second and third floors, and the fourth floor is devoted to surgery, resident physicians' quarters, and the sanitation office. The ground floor is given over to the outpatient clinic, laboratory rooms, and maintenance rooms.

The present staff is adequate for a student population of 24,000. On the Berkeley campus there is a total of 30,000 individuals registered, with an average of 19,000 throughout the 12 months, and a maximum of 24,000 registered at one time.

A dental department supplies, without charge, emergency dentistry, such as for fractured jaws. More time is available to students than is taken up by the emergency care, and this time is at the disposal of the students for temporary dental care only. This service, for which charges are made, is made available particularly for students from out of town who do not have a local dentist. The professional dental staff consists of 10 part-time dentists and a dental hygienist.

On the hospital staff there are 78 physicians, including 39 diplomates of various specialties. There are also social service workers, x-ray technicians, nurses, orderlies and clerical staff, making a total personnel of 231.

In general, the physicians on the staff are part-time. It has been found wise to utilize the general service of the physicians in the community who are most willing to contribute, in part, to the health service. The wisdom of this is shown in the fact that the busy practitioners and specialists giving part of their time are more valuable, we believe, than those who would limit their experience to this age group. There is an equivalent of one full-time physician for every thousand students registered.

Public health aspects of the program are a function of the sanitary and safety departments. The president, through the university physician and the safety supervisor, is advised of all insanitary and unsafe conditions. Inspections and recommendations are made by a corps of sanitarians and a safety engineer for the correction of all hazards of living quarters, food establishments, housing, plumbing, swimming pools, heating, water supply, insect and rodent control, and all environmental conditions on and adjacent to the campus. The sanitarians ascertain that all food handlers have been examined. They further conduct food handling classes and place responsibility for the maintenance of sanitary conditions on the managers of such facilities.

Off-campus student boarding houses and restaurants are inspected by cooperation with the officials of the city and cooperation with the deans of the

university inspection officers. All plans for new buildings are scrutinized for suggestions as to sanitation and safety measures.

All entering students and those not examined in recent years must have photofluorograms of the chest taken. Those with a history of tuberculosis or contact with tuberculosis, or with a history of pleurisy in the last two years, and those with questionable x-ray findings are called in at regular intervals during their college residence for observation. This obtains also to abnormalities of the heart or other pertinent conditions.

The University of California's athletic program, intercollegiate and intracollegiate, is tremendous. No student, however, may draw equipment or participate in athletics until he has a certificate of physical fitness from the student health service. So far as handicapped, sick or injured students are concerned, the university physician's decision is final in all cases with regard to their further participation. There are several physicians assigned specifically to duty as athletic physicians.

No application for entrance to the university is accepted unless a certificate of successful vaccination within seven years is presented. Vaccination and immunizations for traveling students, faculty and employes may be had upon request.

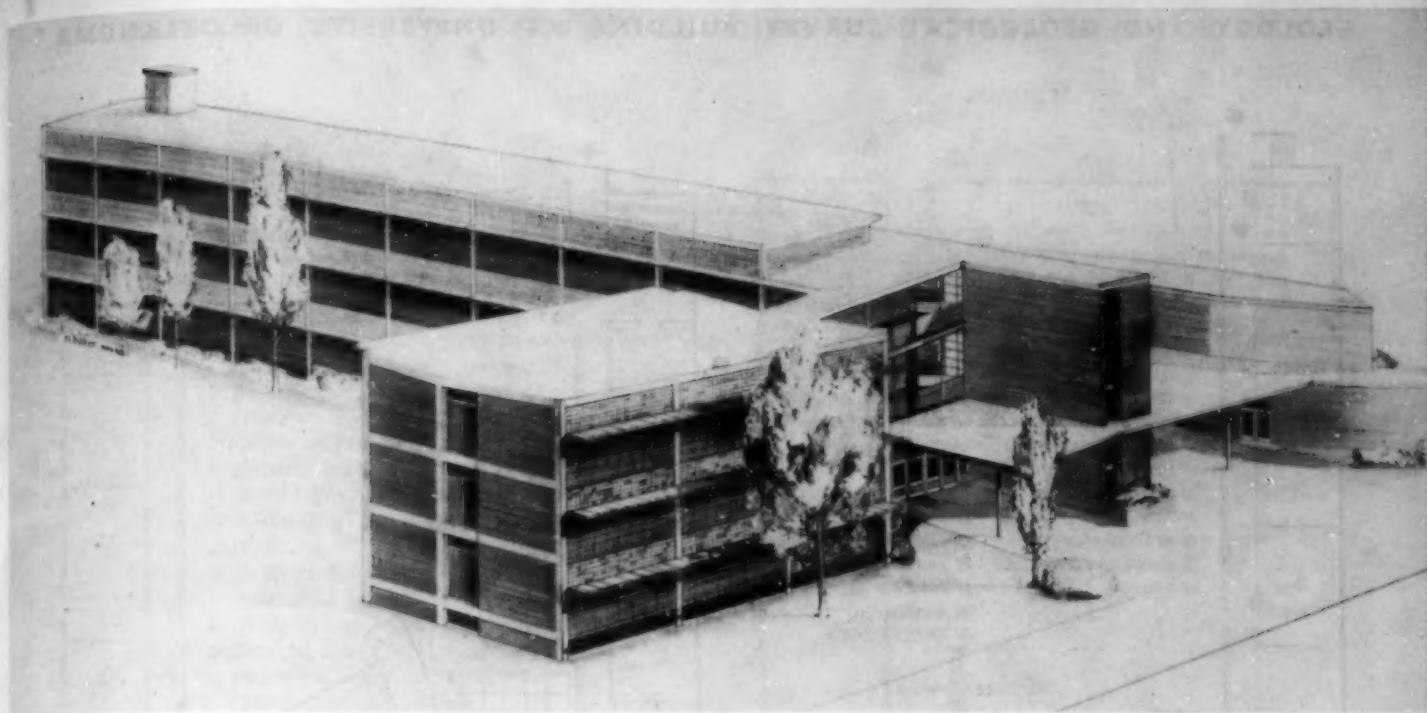
A pharmacy is available from which medicines are dispensed, without charge, on order of physicians.

The hospital is available in event of community catastrophes for first aid and acute emergency cases when other beds of the community are not available, and when the care of sick students is not interfered with.

#### **CONCLUSION**

The student health service of the University of California at Berkeley is not an insurance plan but a project in occupational medicine for the students, without other charge than the registration fee. The cost is borne by the university. It assures sanitary control of food and living quarters and optimum working conditions; excludes contagion from the campus, and controls epidemics by immediate hospitalization of all persons with communicable disease and by epidemiological studies. The student health service treats all illnesses arising during residency and maintains an adequate hospital and outpatient clinic.





COLLEGES ARE SUPPOSED TO BE THE repository of the traditional. Perhaps this will become their death knell. It is rather alarming that so few campus structures have the "new look"—alarming in view of the fact that those few that have broken loose from tradition have proved a source of inspiration to the many who have lived and worked in them.

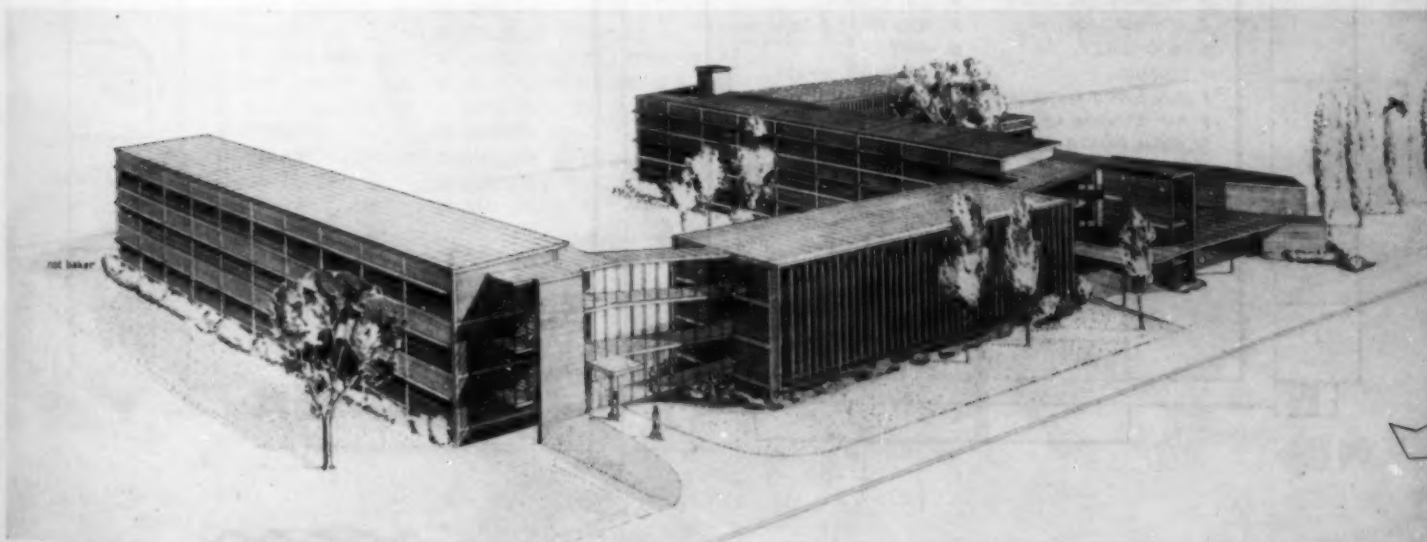
The Geology and Geological Survey Building at the University of Oklahoma departs from the traditional in many ways. The structure has been designed on the principle that an organic building will enable the students to learn faster and better and will make teach-

## FIVE IN ONE

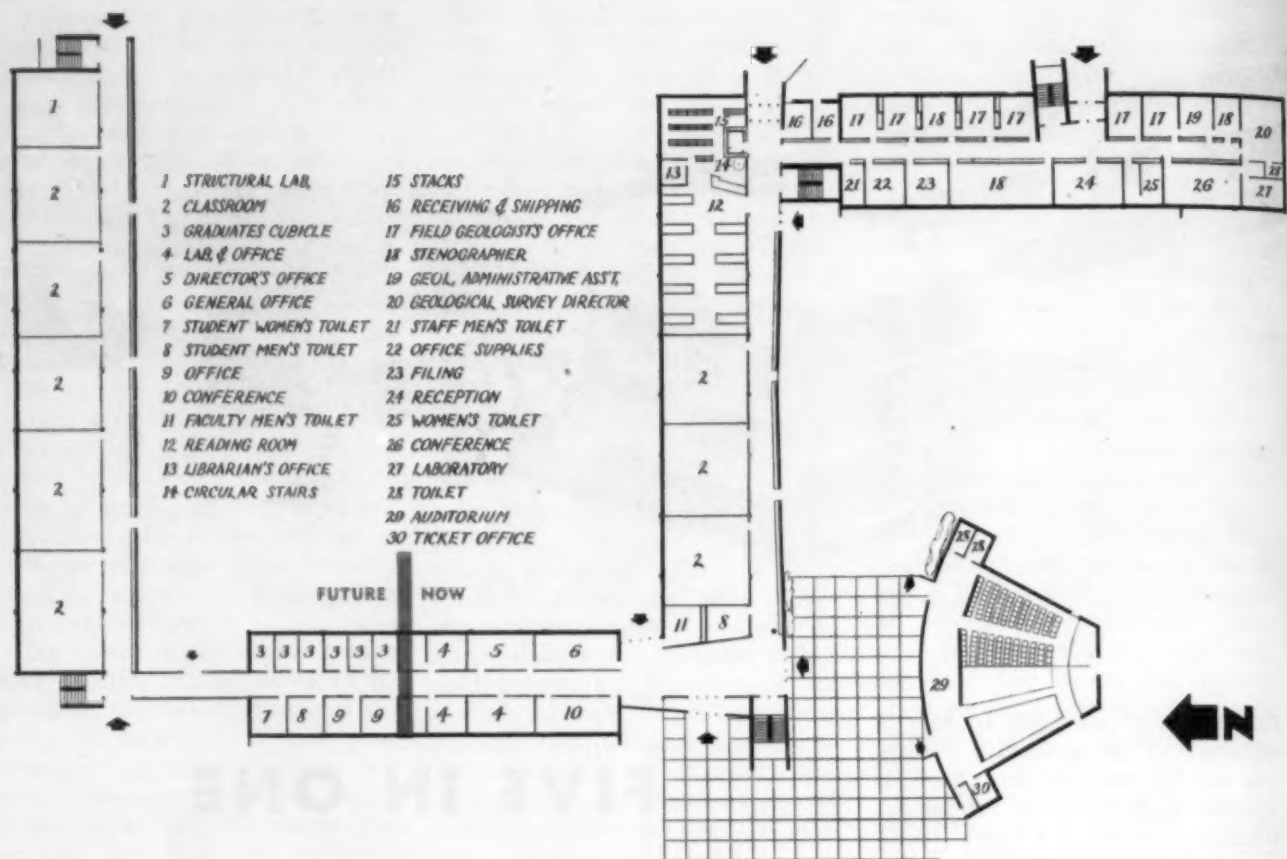
**University of Oklahoma will serve geology students and geologists in five-unit structure**

**ROBERT W. VAHLBERG**

Walter T. & Robert W. Vahlberg  
A.I.A. Architects  
Oklahoma City, Okla.

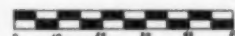
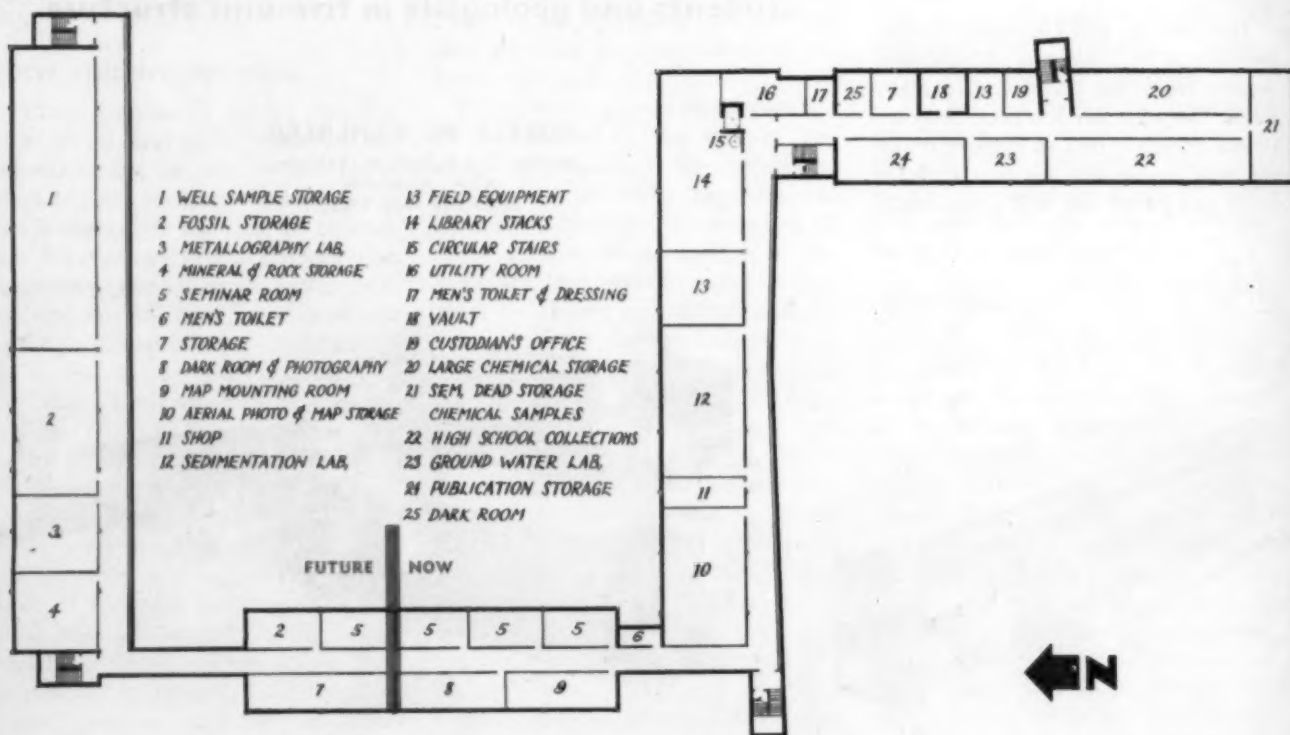


# GEOLOGY AND GEOLOGICAL SURVEY BUILDING AT UNIVERSITY OF OKLAHOMA



FIRST FLOOR PLAN

GROUND FLOOR PLAN



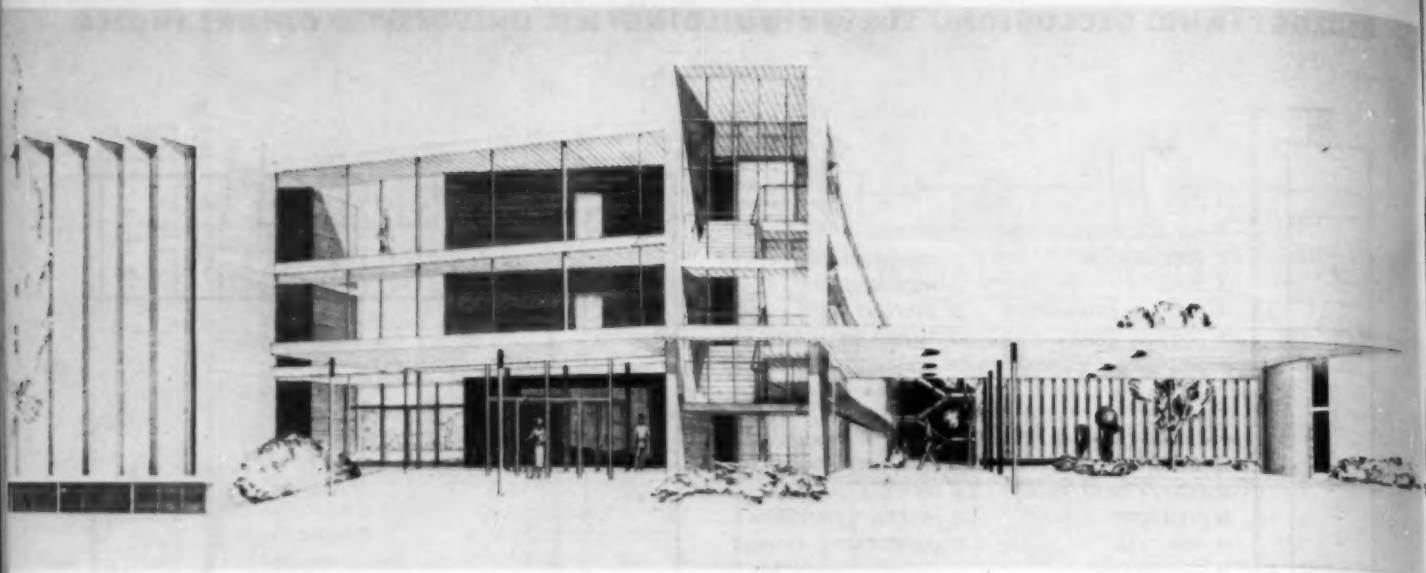
## A



AH







ing a more satisfying profession for the instructors in their daily work.

The main keynote of this design is *flexibility*. It encompasses proper orientation, good cross ventilation, unobtrusive but proper lighting, both artificial and natural, ease of maintenance, adaptability to changing conditions through the years; in short, it has a look which is conducive to clarity of thought and elevation of spirit and which also functions in every way.

The building was finally conceived in the following groups:

1. Two separate buildings for geology classes.
2. One separate building for offices and laboratories of faculty, and graduate cubicles.
3. One separate building for the

The artist's sketches pictured on this page, as well as those on pages 15 and 19, show how the five buildings are connected by enclosed ramps and corridors.

offices of the geological survey unit (a 12 month operation).

4. One separate building for larger gatherings (250), such as lectures, campus student meetings, and state meetings of oil and geological societies.

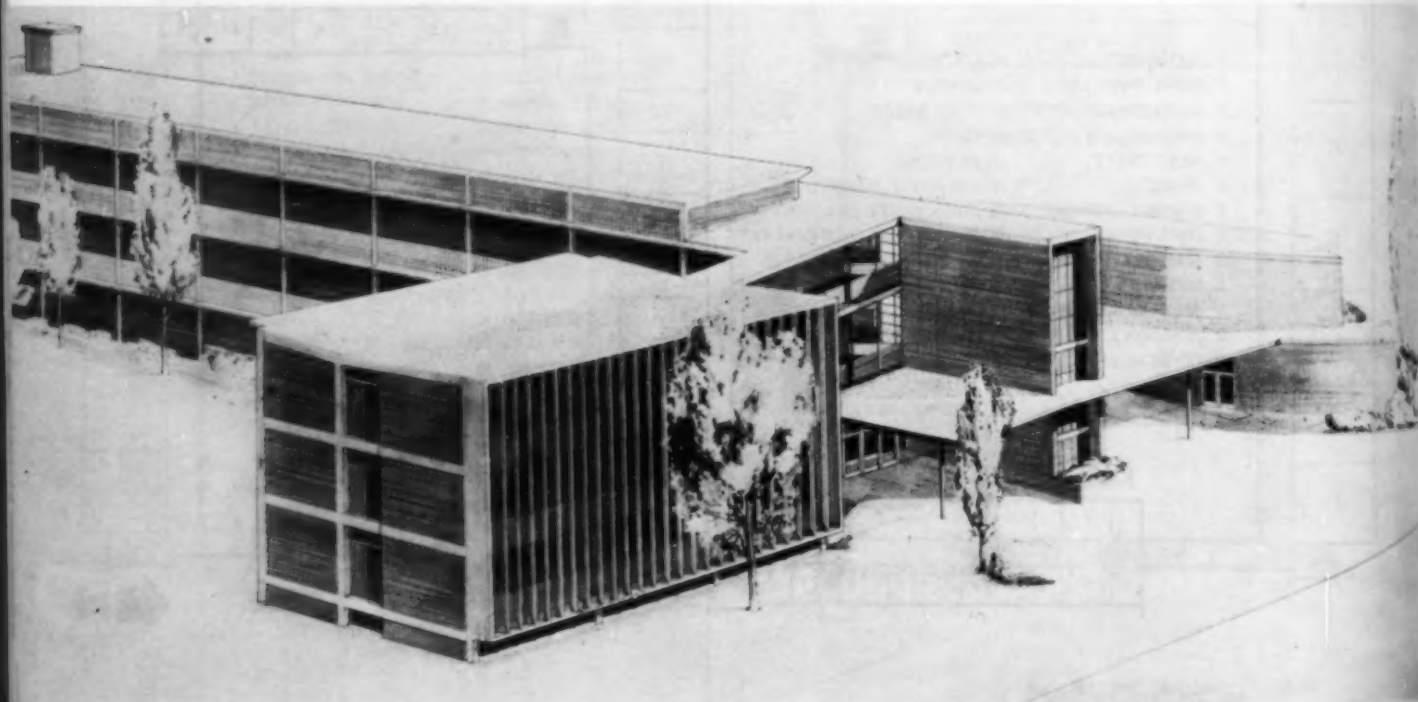
All these buildings are connected by enclosed ramps and corridors. A large covered way for outdoor sculpture and planting gives protection for street access and connects the classroom building to the auditorium. At the main entrance, a snow melting system

of radiant pipes will be installed. Also, a large wall space has been provided for a changing geological display.

All exterior access to the building on the first floor is by means of ramps. Thus, by using the elevator, a crippled person easily can attend any class.

All classrooms and laboratories have main north light with high bilateral south light for warmth and ventilation; the offices have east and west orientation. The sun control on the west side was first taken care of by fixed vertical louvers, but these were later dropped for sun hoods and directional glass block.

For proper use of space and, of course, economy, the office buildings are only 10 feet from floor to floor, while those in the classroom building



are 12 feet from floor to floor. Laboratories, too, are generally of the square type.

Each of the four floor plans illustrates the character of the building, each building being given a maximum amount of light, air and open space. The drawings indicate what will be built now and in the future, thus showing how the future needs will be taken care of.

The exposed materials in the building were selected because they were durable as well as beautiful. Such materials as marble, brick, glass, asphalt tile, acoustical tile, and directional glass block are attractive and require a minimum of maintenance. All columns, exterior beams, and window sills are covered with marble slabs. Floors throughout are asphalt tile over concrete. A nonslip covering similar to asphalt tile is used over interior ramps. Ceilings are acoustical tile over vermiculite plaster.

The building is of skeleton steel construction on a modular layout, fire-proofed with an insulated plaster and pumice concrete to provide about four hours of fire resistance. This method considerably reduced the dead load on the frame, thus reducing the size and cost of the framing members.

Exterior walls between marble covered columns and below the operable and fixed windows and directional glass blocks are of face brick; hollow cavity construction, with  $\frac{1}{4}$ " round reinforcing bars every alternating fifth course; the exterior surface is of matt red face brick; the interior surface of smooth yellow face brick.

All windows are steel (intermediate weight) casements in classroom areas and project-in type in offices.

Partitions between classrooms and corridors are made up of modular (3'0" by 5'6") glass display cases for the display of minerals. Each case is individually lighted. Above these display cases for bilateral light and cross ven-

tilation are steel windows, alternating fixed and operable "sash. Above the windows is a suspended plaster wall.

In a classroom building, the "new look" shows its superiority over tradition in the use of movable partitions, which allow many uses for its allotment of space. The positions of all corridor walls are fixed, but since all display cases are movable, the doors and nature of the corridor can be rearranged as required. The division partitions between all spaces, except library stacks, are designed to be movable. The interior space has been kept clear at all wall lines with no projecting columns, thus allowing partitions to be rearranged as teaching and space requirements change with the future years. The modular line of rearranging partitions occurs at each column and at each window mullion. In offices, filing cases form division walls. The corridor shapes follow the density of traffic flow.

#### CENTRAL HEATING SYSTEM

The heating is an extension of the university's central steam system. However, radiators and pipes for heating are recessed in the cavity walls or in the columns except on the ground floor, which has ceiling radiation for ease of access into the existing steam tunnel. All these columns have removable hollow metal cover panels for access to pipes for repair and maintenance. Space has been left in corridor ceilings for installation of future air conditioning ducts.

One elevator with pass-through doors for freight distribution, and passenger use as required, stops on all floors and library stack levels. A dumb-waiter type of booklift is provided for library stacks.

Although the cost of construction of some recent buildings in this area has run between \$12 and \$15 per square foot, the first unit of the geology building was contracted at

\$8.90 per square foot. The building contains 49,000 square feet.

The lighting in the building, both artificial and natural, is a striking deviation from that of the traditional collegiate building. There is an airy and open feeling here because of bilateral light and cross ventilation in the corridors, as well as in classrooms and laboratories on every floor. Lights in the corridors are recessed, producing a clean effect, easily maintained as to dirt accumulation, fingermarks and soot.

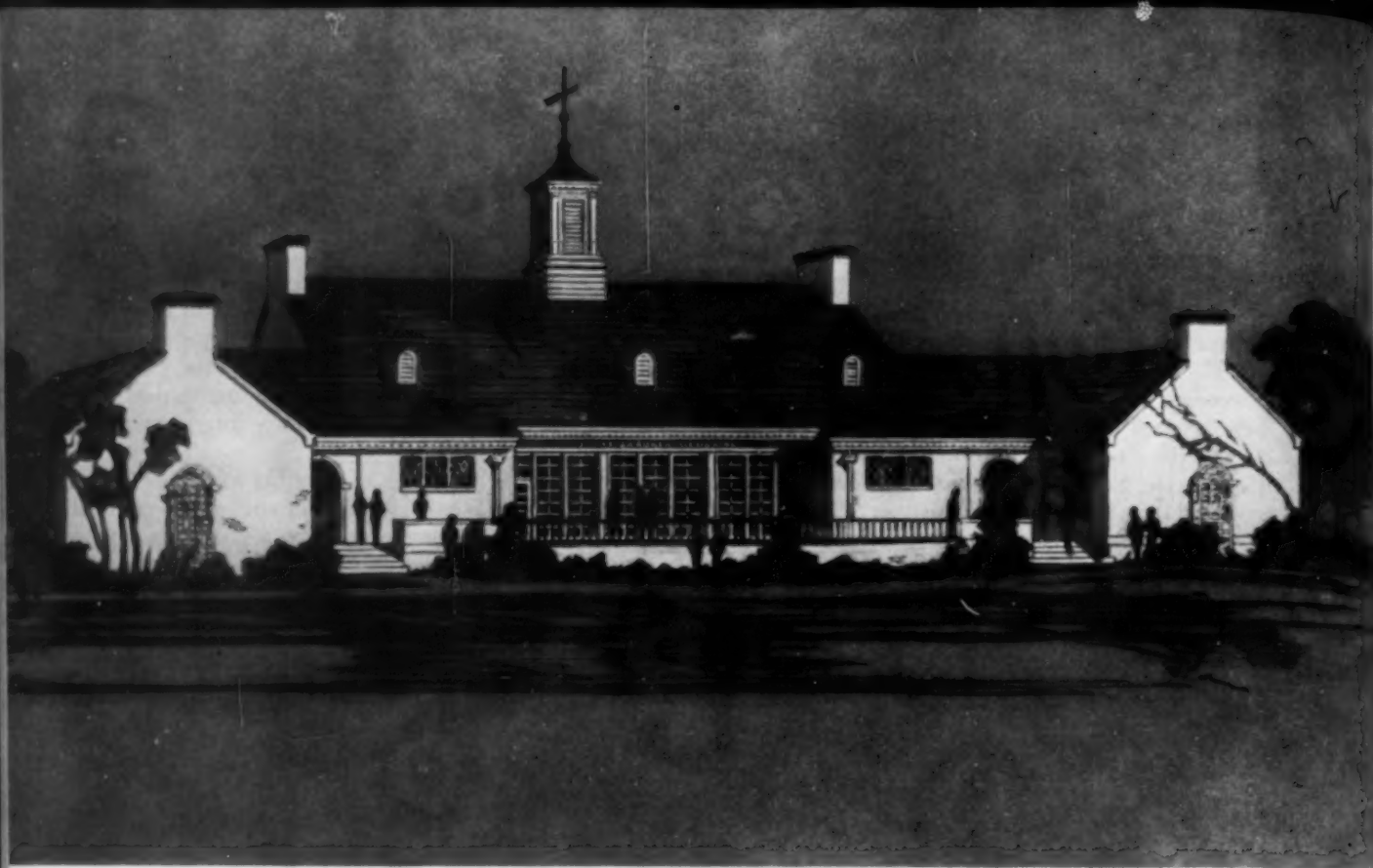
In all of the other rooms are surface mounted fluorescent tubes of small diameter to allow a maximum amount of flexibility in rearranging spaces.

The prime function of the building is to house the teaching process. With this in view, no confusing ornamentation was considered. The use of marble, glass and brick in their simplicity and clarity is its ornamentation. There are, however, many individual aids for the instructor. The control switches for class and laboratory lighting are located behind the instructor at the center of the room to allow for facile control of artificial light in using visual education. There is one three-way switch at each door.

In order that the instructor may require no assistant in making use of visual education, overhead screens are located at the front of the room behind the instructor. The projector on the instructor's desk sends the picture to an angle mirror located on a portable stand, which in turn reflects it to the screen above and in the opposite direction. Such details, while not ornamental, make the professor's work pleasanter and the subject more easily learned.

Thus, this is my interpretation of an organic building in the light of *use* as a basis for the organic form—a building that has life, that moves, and by its very function sponsors growth and freedom.





## Small college **UNION BUILDING**

*serves as focal point of campus life*

THE JUNIOR COLLEGE OF GARDNER-Webb at Boiling Springs, N.C., had only a small and woefully inadequate plant when O. Max Gardner, a former governor of North Carolina and a native of the county in which the college is located, assumed the leadership in its development and, in addition, contributed greatly needed funds.

Appointed by President Truman as ambassador to the Court of St. James, Mr. Gardner died on Feb. 6, 1947, just prior to boarding the ship that was to have taken him abroad. His will contained a further bequest to the college, which was supplemented by the Gardner Foundation, headed by his widow, and used to erect the O. Max Gardner Memorial Student Union Building.

Because the college is coeducational with boys' and girls' residence halls located at opposite ends of the campus, the dining facilities for the campus

### **FRED VAN WAGENINGEN**

Architect  
Shelby, N.C.

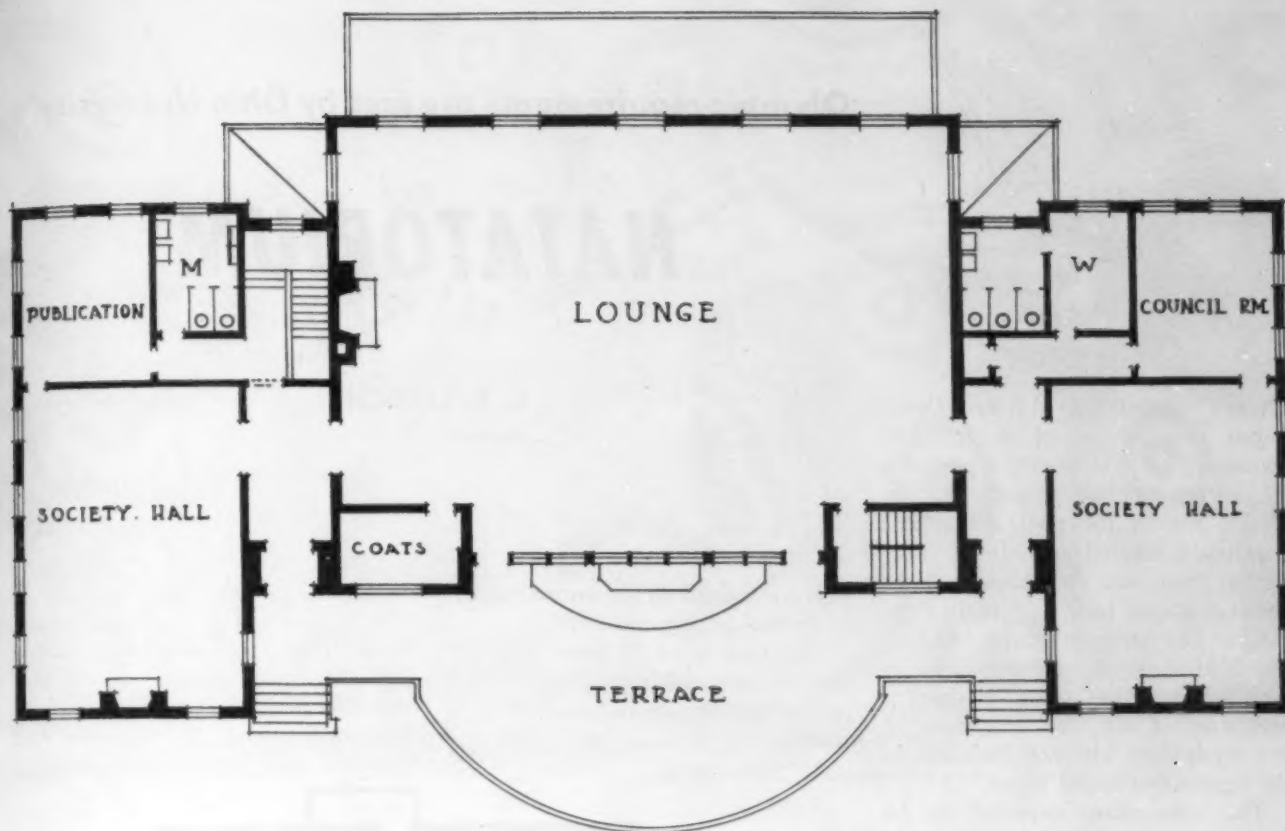
were located in this building, which is considerably nearer the girls' quarters than it is to the boys'. The building is set against a bank, with the result that it presents a one-story appearance on the campus side, and a full two-story appearance on the side fronting the road that circles and serves the campus. The traditional design was dictated by the desire of the college to adhere to the style of building presented by older units on the campus. The symmetry of the design, however, resulted from the program requirements and the approaches from the residence halls.

The upper floor contains a 45 by 65 foot lounge opening onto a terrace that fronts the campus. It was deemed advisable to make this lounge large

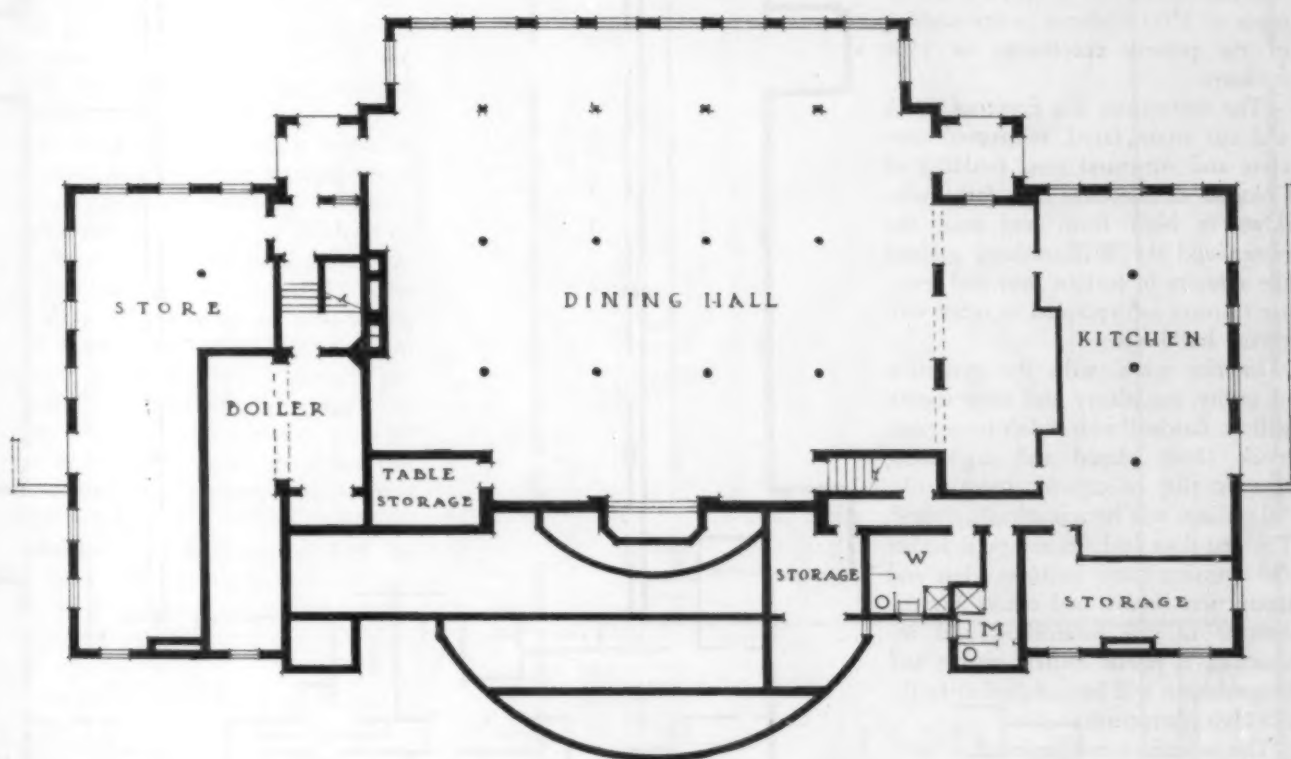
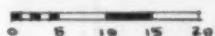
enough for the added accommodation of a number of day students attending the college. On either side of the lounge are rooms intended for the use of the two societies of the college, in one or the other of which all students have membership. This floor also contains offices for student government and publications. The ground floor contains the main dining hall, kitchen and storage areas, and a student exchange store and post office. The building, of semifireproof construction, contains approximately 15,000 square feet of floor area. The cost, including dining room and lounge furnishings and kitchen equipment, will total approximately \$155,000.

Gardner-Webb recently has been admitted to the Southern Association of Colleges and Secondary Schools, and plans have been completed for a new residence hall to house 100 boys as the next step in its development.





FIRST FLOOR PLAN



GROUND FLOOR PLAN





Olympic requirements are met by Ohio University's

# NATATORIUM

**L. F. LAUSCHE**

Supervising Engineer  
Ohio University

OHIO UNIVERSITY AT ATHENS, OHIO, began construction of a \$396,342 swimming pool in March, a part of a \$2,500,000 building program that includes, besides the pool, a fine arts building, a hospital, an addition to the power plant, and an addition to the men's residence hall. This is the largest building program in the 145 year old history of the oldest university west of the Alleghenies. Architects' fees, cost of the land, and most of the equipment are not included in the figures mentioned above.

The natatorium, expected to be ready for use in February, is centrally located on a site near the present Music Hall, just off the main university campus and across the street from the men's residence hall. The present swimming pool, 25 by 40 feet, was inadequate for the prewar enrollment of 3500 students, to say nothing of the present enrollment of 5500 students.

The natatorium is a fireproof, brick and cut stone faced, reinforced concrete and structural steel building of Colonial architecture. The large windows in both front and rear, the tower, and the Williamsburg grained tile shingles in antique gray and green are features incorporated in other university buildings.

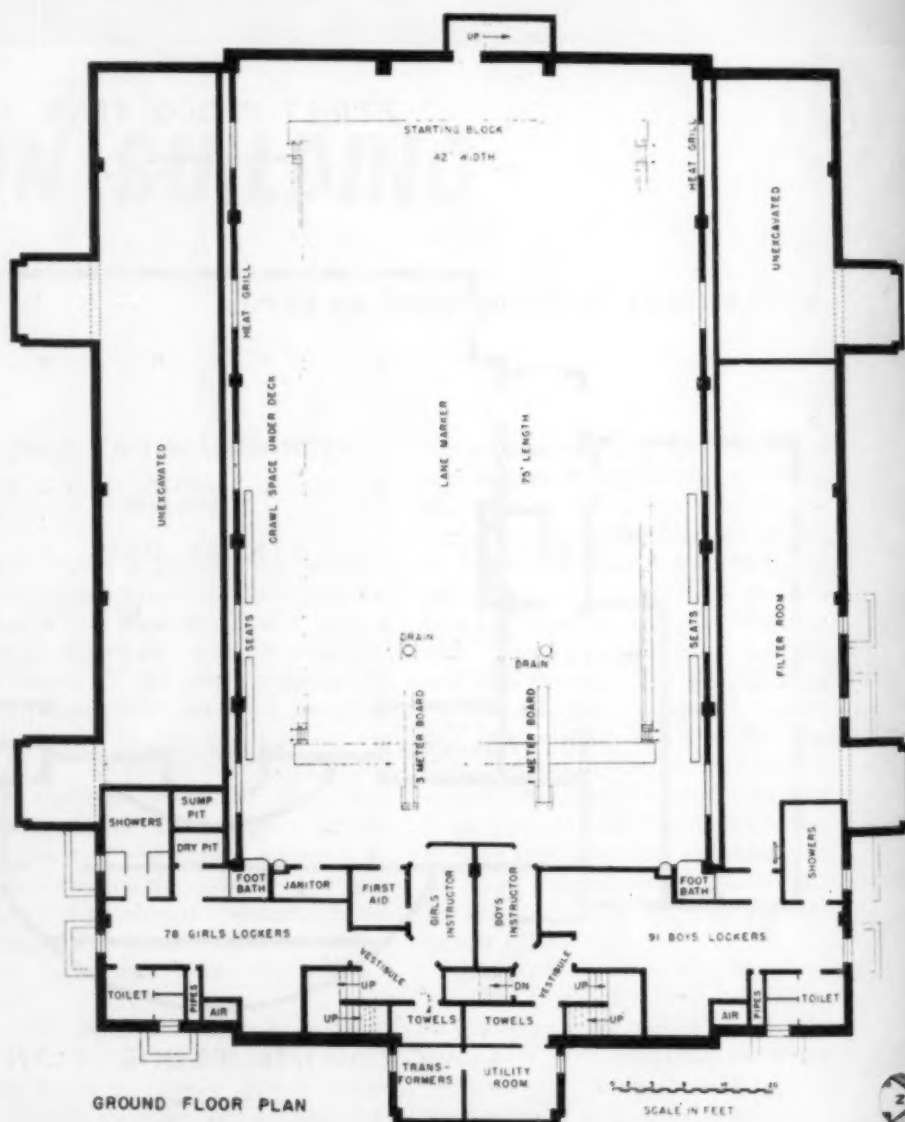
Interior walls, with the exception of utility, machinery and filter rooms, will be finished with either terra cotta block (both glazed and unglazed), ceramic tile, or ceramic mosaic tile. All ceilings will be acoustically treated. The first floor includes the pool, locker and dressing room facilities, class and instruction rooms, and offices for the director of the natatorium and instructors. A public address system and a signal horn will be installed to facilitate class instruction.

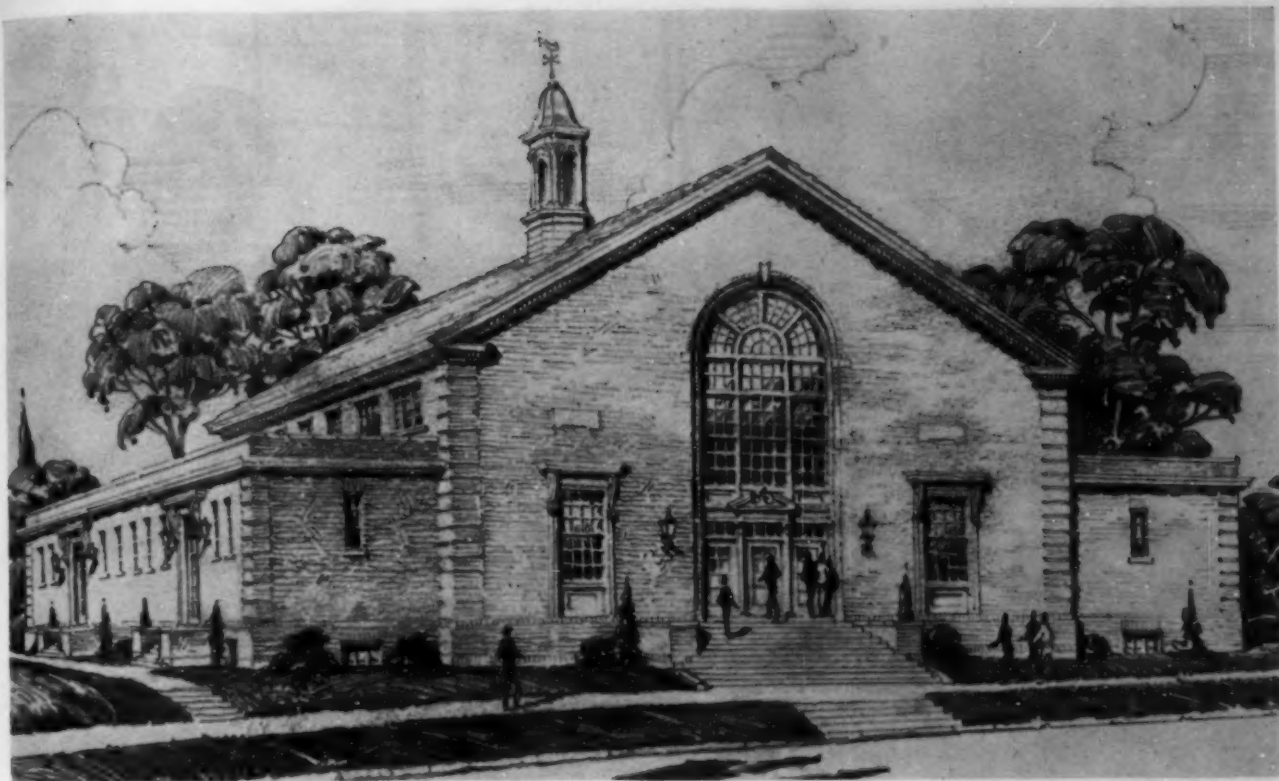
The second or mezzanine floor will provide seating along the west side of the pool for 610 spectators, with additional seating for 274 persons on the east end, with girls' locker, shower,

instruction and other rooms underneath the seating area.

The pool is of Olympic style and size to meet all regulation requirements for collegiate and even Olympic competition. It is 42 feet wide and

75 feet long, with a rated capacity of 116 persons and five standard racing lanes. It is 12' 2" deep at the diving end and for a distance of 12 feet, reducing in depth gradually over the next 38 feet to 4' 10" and then to a



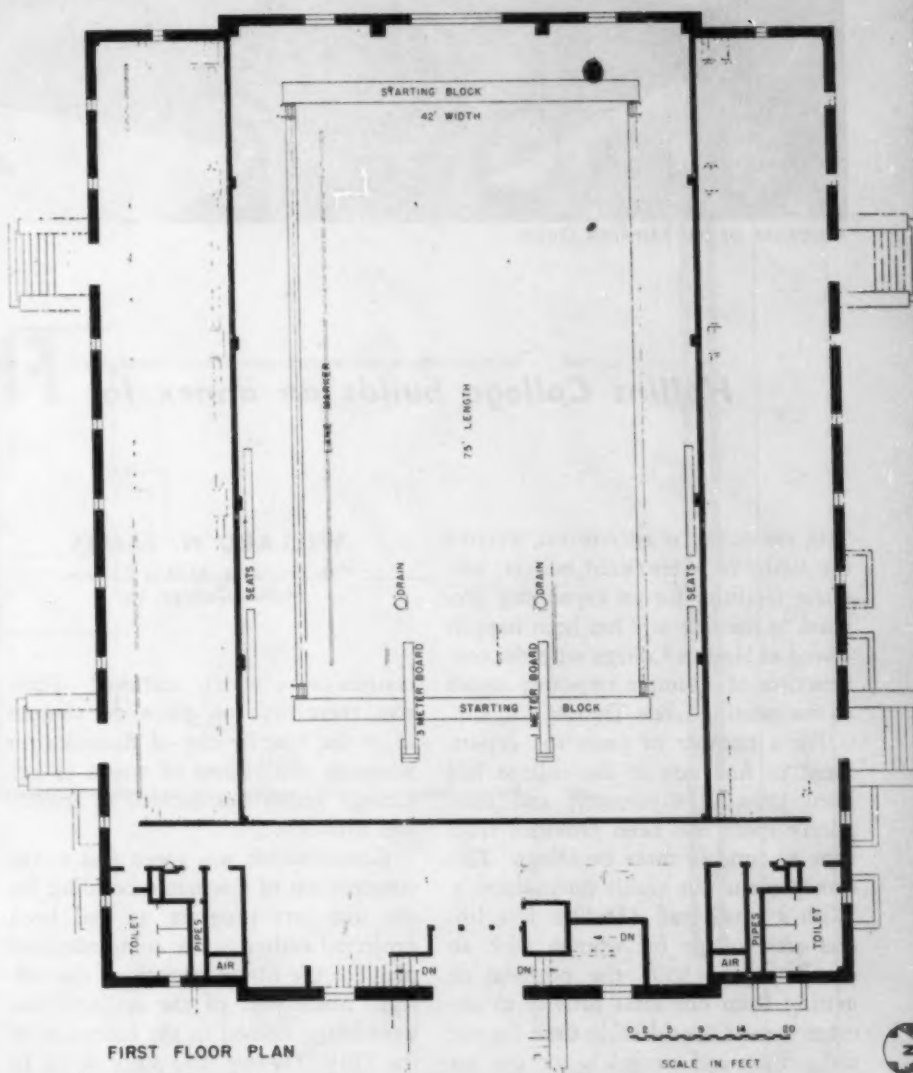


3' 6" depth over the next 25 feet of its length.

A feature of the pool should be the high level of lighting effected by a total connected lighting load of 50 kw. Overhead lights will be serviced from a steel catwalk high up in the steel girders; underwater lights, from a passageway along the sides of the pool. Spotlights are to be provided for water carnival events.

All filtering, chlorinating, chemical treating, and pumping equipment is located under the bleachers. It is estimated that there will be 27 tons of quartz or silica sand and gravel aggregate in the filtering system. The building will be supplied with steam, at 3 pounds per square inch; vacuum return, hot water, at 75 pounds per square inch, and electricity at 2300 volts from the central power plant of the university. All of these services enter the building from a stub tunnel terminating in a utility and transformer room under the front steps of the building. The heating system will consist, in the main, of steam unit heaters, thermostatically controlled.

Harold Field Kellogg of Boston and Los Angeles is the architect for Ohio University's natatorium illustrated above. Shown to the left is the ground floor plan; to the right, the first floor plan.







A CORNER OF THE PAINTING STUDIO

Photos by John Kelley

## Hollins College builds an annex for **FINE ARTS**

THE PROBLEM OF PROVIDING, WITHIN the limits of a restricted budget, adequate facilities for an expanding program in the fine arts has been happily solved at Hollins College with the construction of a simple two-story annex to the existing Little Theater.

For a number of years the department of fine arts at the college had been growing vigorously, and temporary space had been provided from time to time in three buildings. This arrangement was highly unsatisfactory. With a small staff (Hollins is a liberal arts college for women with an enrollment of 350) the problem of getting from one class activity to another wasted considerable time for the instructors, and materials for the art

### WILLARD N. JAMES

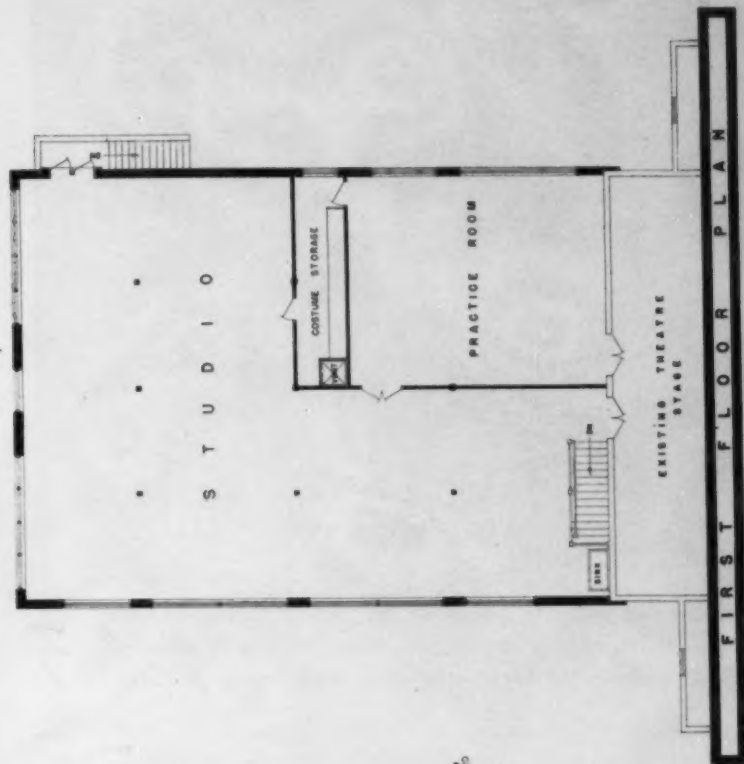
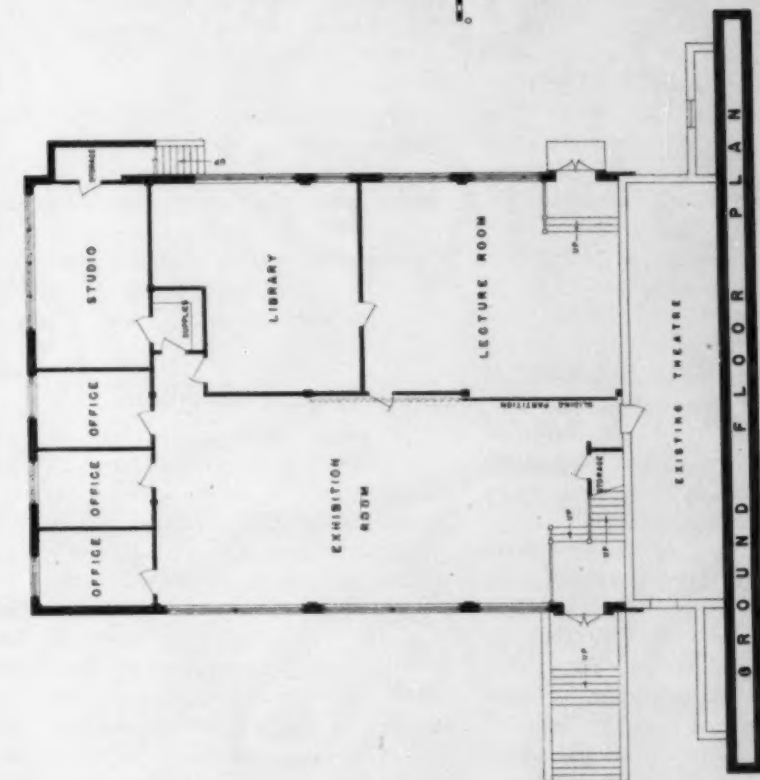
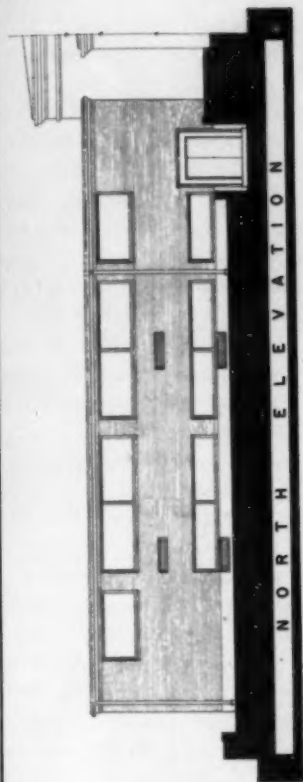
Vice President, Hollins College  
Hollins College, Va.

courses were widely scattered. Then, too, there was no place on campus or in the near-by city of Roanoke for adequate exhibitions of works of art. College authorities decided to remedy this situation.

Consideration was given first to the construction of a separate building for the fine arts program as had been projected earlier in the comprehensive plan for the future growth of the college. Since part of the art activities were being housed in the basement of the Little Theater, and since work in

the drama and the fine arts are allied, it finally was decided that it would be suitable and economical to build an annex to the theater rather than an independent structure.

The architects for the college, W. Pope Barney and Roy W. Banwell of Philadelphia, were requested to design a simple structure not to exceed 7500 square feet of floor space to provide (1) adequate well-lighted space to accommodate classes in the graphic arts; (2) a practice stage adjacent to the existing stage that could be used by classes in the modern dance and by drama students when the theater, which also serves as the college auditorium, was otherwise engaged; (3) a costume storage room; (4)



HOLLINS COLLEGE — ARTS ANNEX



One of the two swinging panels in the exhibition foyer. One panel can be folded against the wall when not in use, allowing more floor space in the foyer when it is employed for lectures.

exhibition space for the permanent art collection of the college and for frequent traveling shows; (5) a library to house departmental books, prints and lantern slides, and to provide comfortable quarters for the use of these materials; (6) a lecture-projection room that could be darkened, and, finally, (7) studio offices for the instructional staff. The architects were advised that the building would have both day and night usage and would probably later be occupied in the summer months as well as during the regular college session.

A study of the plans on the preceding page will show how some of these requirements were satisfied. The studio occupies that part of the upper floor that affords the best light for painting. The less desirable portion, from the standpoint of light, is utilized for the costume room and the practice stage. The floor level is the same as that of the existing stage, and window spaces in the original rear wall were used for doors. These are sufficiently wide to permit easy shifting of stage accessories and a grand piano.

Adequate hanging space for exhibitions is provided on the ground floor through the use of specially designed panels suspended from the structural steel beams to augment the wall hanging area.

The library is the only room in the building that might be termed finished

in the ordinary use of the word. Walls have been plastered, the ceiling treated with acoustical tile, and the floor with asphalt tile. This room contains unusual furniture for the examination of slides, for the convenient inspection and storage of prints, and for books. The furniture has been so arranged as to create an alcove that is used as a seminar room.

An unusual feature of the lecture room is a sliding partition that can be moved back for gallery talks and for similar gatherings to provide more than double the seating capacity of the lecture room itself. Portable metal chairs are moved into the exhibition floor area when there is a crowd too large for the lecture room.

#### CONNECTS WITH OLD STUDIOS

The ground floor area connects by a single opening under the stair with the old studios in the basement of the theater. Lithograph and etching presses, a sculpture room, a workshop, and a packing room still are housed in the original building.

All of the furniture in the new building, with the exception of chairs and filing cabinets and drawers, was designed by two of the art teachers, John R. Ballator and Robert E. Larter, and built at the college. The lecture room is equipped with tables fitted with specially designed low wattage, shielded fixtures, so that students have

sufficient light for note taking but not enough to interfere with their view of the projection screen at times when illustrated lectures are being given. Three lanterns can be used simultaneously to project images against a wall with a white plaster finish.

The building is of red brick and cinder block construction and, despite the large areas of glass used, blends satisfactorily with the existing theater. On the ground floor the cinder blocks have been painted, but in the studio area the natural finish of the blocks has been left exposed. The steel beams and columns have been painted the color that steel beams usually are when they come from the mill, and the same red has been used on the trim. Three tints of gray have been used in the ground floor offices and exhibition space.

The building is lighted with fluorescent fixtures, and those in the studio area have individual switches so that light can be controlled to suit various groupings and conditions. Light from the large picture windows in the studio is controlled through the use of a vertical metal "venetian blind."

Heat is supplied from the central power plant through unit heaters thermostatically controlled. Units on the ground floor are the conventional fan type of blowers with variable speed motors. Convactor units of the wall type with manual controls to regulate the amount of outside air desired are used on the first floor. These units can be utilized in hot weather to circulate air within the building and to draw in outside air. Two large metal ventilator stacks with outlets in all rooms except the faculty offices provide an air exhaust system. Louvered openings control the volume of air escaping.

Through the ingenious use of color and furniture, what appeared on the blueprints to be little more than a garage-like workspace has turned out to be an attractive, smoothly functioning art building. Later, if it is desired, walls and ceilings can be plastered, the cement floor on the first level can be covered with tile, and the building generally dressed up. Faculty and students who work in the building, as well as visitors, have commented upon the honest and workman-like appearance of the structure, and there has been no demand so far for a "prettier" finish.

The over-all cost of the structure, including all fees and furnishings, was \$62,727.02.



# LABOR SAVING EQUIPMENT

*cuts operating costs at University of Cincinnati*

**J. J. WENNER**

Assistant Superintendent  
Buildings and Grounds Department  
University of Cincinnati

FOR A LONG TIME INDUSTRY HAS realized that one of the best ways to combat steadily increasing labor costs is to adopt more and better labor saving equipment. Colleges and universities have been slower in adopting such new equipment. Now that the bulk of the G.I. student load has passed and expanded universities and colleges will be more in competition with one another for new students, the need for reduced operating expenses will loom larger and larger.

The buildings and grounds department of the University of Cincinnati, under the direction of W. B. Schoelwer, superintendent, has already taken up this challenge by investing in more and better labor saving equipment. A brief description of some of our more novel labor saving devices may prove helpful to other schools faced with the same problems.

For safety reasons, most outside window washing, above the first floor, is done with the operator using a safety belt. This is a slow procedure at best. Coupled with the difficulty of working in classrooms and offices when they are occupied, year-round window washing in schools becomes wasteful of manpower.

## **WINDOW WASHER'S SCAFFOLD**

We have partially corrected this difficulty by using a standard portable aluminum tower, made up in sections. This tower, when built to its full height, allows the employee to work safely and comfortably up to 27 feet high. Plywood platforms at three different levels allow three men to wash first, second and, in many cases, third floor windows all at the same time. Being mounted on 4' 10" pneumatic tires and weighing only about 250 pounds total, the tower is easily maneuvered over rough ground without being dismantled. In some cases this means that one setup of the tower,

a matter of 10 minutes work for two men, will allow them to clean all windows on first and second floors, and in some cases the third floor, with no more extra effort than is involved in pushing the tower to the next column of windows. No objections have been voiced about the workmen interfering with classes, as they always work from the outside. The terrain of our campus is hilly, and all buildings have considerable foundation planting, but neither of these greatly impedes the use of our tower equipment.

Being very light and easily knocked down and erected again, the tower finds considerable use by the other trades, such as in replacing hard-to-reach light bulbs, cleaning the inside of large windows, and taking down and setting up 15 foot draperies.

## **MAGNETIC NAIL PICKUP**

We have a number of cinder parking lots adjacent to temporary wood buildings acquired from W.A.A. shortly after the last war. Since these buildings were shipped to us in sections, their erection required considerable nail pulling and nail driving, with the result that many nails found their way into the parking lots, much to the annoyance of the motorists using them. The usual raking and hand pickup of the nails was a slow and tedious job, and rather inefficient besides.

In our search for an easier way to do the job, we found the answer in an inexpensive standard manufactured item that consists of a number of permanent magnets mounted in a brass tube, which is provided with wheels, a handle and a cleaning device. It is rolled along the ground like a hand carpet sweeper and has an amazing

attraction for any ferrous object. Large sixteenpenny nails literally jump for it. It holds approximately 2 pounds of iron before it needs cleaning.

We also use this magnetic device for picking up bottle caps around concession stands adjacent to the football field and for picking up nails after a dismantling job on our commencement platform located in the middle of our football field, which is a mean job by any other method because of the tall grass.

## **SPRAY MACHINE FOR MARKING**

The marking of athletic fields and tennis courts by the usual roller or powdering machine is both slow and wasteful of materials. Borrowing an idea from Cincinnati's highway maintenance department, we purchased a standard self-propelling spray outfit normally used for marking traffic lanes on highways. A fixed automatic spray gun lays down a perfectly straight line from 2 to 6 inches wide about as fast as the operator can walk. Any material of thin liquid consistency can be sprayed.

In an actual comparison with a roller line laying machine, we found that formerly a standard football field marking job took 10 man-hours of labor and 600 pounds of marking material as compared to 5 man-hours and 300 pounds of material with the spray machine.

The current vogue is for yard line numerals stenciled on the grass; this spray machine equipped with 25 feet of hose and a hand spray gun makes short work of the stenciling job. We use 3 foot high stencils (made in our shops) to simplify the job of spraying on these numbers. Besides temporary marking of athletic fields, using finely powdered calcium carbonate mixed with water, we also spray lacquer for such things as traffic lanes and asphalt tennis court markings. The usual uses



Left: A self-propelling line marker used on athletic fields and on tennis courts.

Below: Stadium cleaning equipment consists of sprayer normally used in orchards.



of a portable spray outfit are extra dividends for such a machine.

#### ROAD SALTER ATTACHMENT

Last year we equipped a jeep with a front end hydraulically operated snowplow, which, incidentally, makes a good bulldozer for light work. The idea was to get the roads and wider sidewalks cleaned of most of the snow as rapidly as possible before the students had a chance to pack it down. We equipped the rear end of the same jeep with a salt spreading attachment, built in our own shops, so that both jobs can be done simultaneously.

The latter device consists of a metal trough that holds about 150 pounds of salt and is bolted crossways on the rear of the jeep. A chain and sprocket drive from the left rear wheel of the jeep drives the agitator in the salt trough in much the same way that any lawn seed or fertilizer spreader works. Extra sacks of salt are carried in the back of the jeep and poured in the trough as needed.

While the plow is set at such an angle so as to cover a 5 foot path, the salter lays down an even covering of salt only 3 feet wide. This is sufficient as it keeps the salt off the grass, and as the salt melts it spreads out over most of the 5 foot sidewalk span. This same device easily could be converted for quick and easy spreading of large quantities of chemical fertilizers should the need arise.

#### POWER SPRAYER FOR CLEANING

Our concrete stadium bowl holds 31,000 people when filled to capacity and represents quite a clean-up job after every game. Formerly this was accomplished by hand pickup of such things as large newspapers and bottles, followed by hand sweeping of smaller debris, the men working from top to bottom. For an extra good cleanup, the stadium was flushed down, 1 inch hoses operating on a city water pressure of 60 pounds per square inch being used. Even though our stadium is excellently equipped with eight 1 inch hose outlets taking their water from a 3 inch main, this flushing process was slow because of lack of adequate pressure. Some athletic and office spaces under the stadium came in for their share of leakage because of the large volume of water used in hosing down. All in all, it was not a good system.

At the beginning of last football season we conducted a series of tests

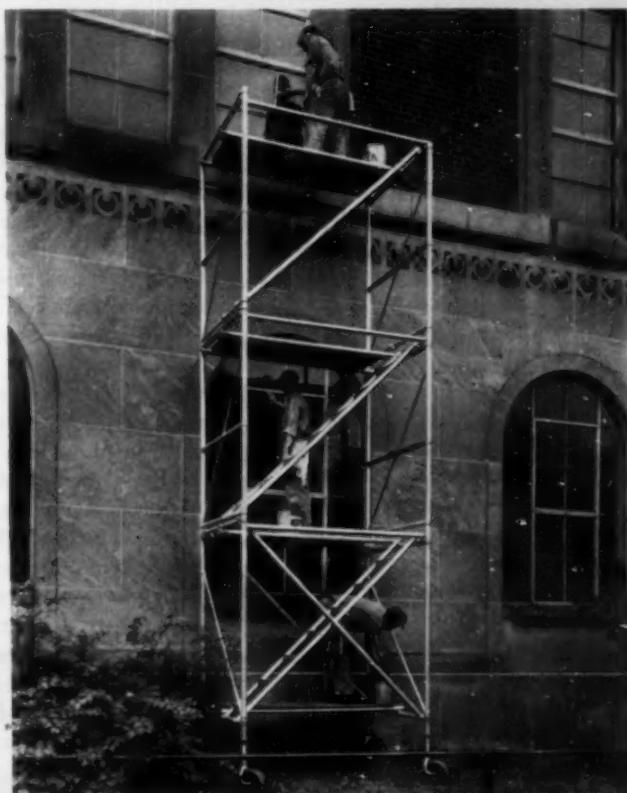
using a sprayer normally sold for orchard work. Mounted on its own four wheels, this machine is easily pushed by several men around the track surrounding our football field. A 1 inch supply line feeds water into its 500 gallon tank at a constant rate. Two 150 foot high pressure hoses can easily be operated at about 750 pounds' pressure, each producing 17 gallons per minute. A standard tree spraying nozzle on each hose completes the equipment. Because of the extremely high pressure, the stream of water literally blasts the dirt ahead of it, although the gallonage of water handled is low enough to be of no serious consequence.

By actual test on cleaning after three games we have shown a labor savings

of about 30 per cent. We still continue to pick up by hand large papers and bottles but will probably dispense with hand sweeping altogether except in freezing weather. The results have been not only a savings in labor but also a marked improvement in the appearance of the stadium.

#### WILL BE USED ON ROADS

Besides using it for tree spraying, we intend cleaning our roads with this sprayer. Equipped with a rear-end boom having some eight flat jet nozzles, the sprayer can be towed behind the jeep, and, we believe, will do a much faster and better job of street cleaning than is now done weekly by means of hand push brooms. This is still in the experimental stage.



Right: A three-decker window washing scaffold. Below: The snowplow equipped with salt spreading attachment.





# BETTER FOOD COST CONTROL

## *Principles of control and their application in college food service*

### PART II

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LAST MONTH WE CONSIDERED THE technics of control over the raw food-stuffs before the fabrication stage is reached. In this second and concluding article we shall discuss control technics in food preparation. The technics here are menu planning, menu precosting, and kitchen economies.

There are three fundamental points in menu planning. They are: (1) to keep a record of the most popular dishes so that sales appeal is in the menu plan, thus reducing leftovers to the minimum; (2) to watch the market for available merchandise and favorable prices on seasonable and profitable items; (3) to use standard recipes for standardization of costs and quality.

Of the several ways to record sales of selected menu items, the food register or counter for the cafeteria line offers the easiest means to obtain sales counts on menu selections. In addition to furnishing information on sales appeal or student demand, this count gives a check on the disposition of food prepared and delivered to the serving counter.

#### KEEP INFORMED

The daily papers supply current information on wholesale market prices of produce and meats. When the institution is close to large market centers, daily visits by the buyer will provide the best information on prices and availability of commodities. The important thing is to keep informed.

Standard recipes are the backbone of the food preparation control. The standardization should include not only ingredients and cooking instructions but the number of portions from each recipe and the cost per portion. It is important that per portion costs are kept current with market changes. Thus, it is possible to know the cost of all dishes that might be served. In-

clusion of an excessive number of high cost dishes can be avoided in planning menus.

At the outset, the menu planner should know the inventory of perishable supplies in the refrigerator and plan for quick use, buying supplementary supplies, if necessary, to prevent loss from spoilage or waste.

Menu precosting is closely allied with menu planning, but the idea is important enough to be considered in its own right as a food cost control. It is a means of predetermining the cost of each menu before it is finally decided upon and released. The cost of each item on the menu is computed so that the assembled menu includes sufficient low cost items. A lost cost menu in a college food service is worth while from two angles. It offers the college community an inviting menu that can be sold at an attractive price, and it gives the food service an opportunity to realize a fair profit.

The cost once determined, the selling price can be set. If the operating factor is 2 or  $2\frac{1}{2}$ , the selling price is 2 or  $2\frac{1}{2}$  times the cost. If experience has shown the resultant selling price to be too high, it can be adjusted to a popular point above cost that sales volume will justify. In arriving at the cost of the ingredients, care should be taken to include cost for all of the unproductive items used in preparation, such as sauces, butter, milk, cream and shortening.

The process of determining the cost is relatively simple. The first step is to find the unit cost of each item—cost of a gallon of soup or a roast ham. Second, by pouring, slicing or weighing, determine the number of portions to be derived from each unit. Third,

divide the number of portions into the unit cost to find the cost per portion.

However, all of the computations of precosting a menu and the thought given to planning an attractive menu will be valueless if portions served are not watched carefully. After the portions are determined, based on cost and the selling price, it is important that portions served are uniform and as planned. Lack of uniformity in serving portions is both expensive and the basis for customer dissatisfaction.

#### ACCOUNT FOR PORTIONS

The final control for food preparation is found in kitchen economies. Food should be cooked in as small quantities as is practicable. This preserves the quality of the food and at the same time reduces the possibility of overproduction. Cooking time and temperatures are important things to watch in the preparation of food, especially of meats. Shrinkage loss from overcooking or overheating is an expensive waste. Records should be kept on production in the kitchen to reconcile with portions sold and left over. Thus, all portions can be accounted for. Other sources of loss in the kitchen are careless butchering, overtrimming of vegetables, overproduction and irregular eating by employees.

Control over sales is our third area. Usually, this area of control receives more attention in the organization than does any other point. All the safeguards must be provided at this point to ensure that receipts are accurately accounted for.

In the cafeteria plan where payment is in cash or coupons, controls must be set up (1) to route customers by a point where trays can be checked and payment received before food is consumed; (2) to give management an opportunity to observe the performance of the cashier functions; (3) to

prevent customers from receiving second selections of food without passing a cashier point; (4) to provide tamper-free devices, such as cash registers and food registers, to record the food sales mechanically; (5) to prevent coupons from being reused before cancellation or destruction; (6) to provide a means of reporting sales on standard forms, for accuracy as well as for statistical purposes; (7) to ensure that total receipts are transferred to the business office and properly receipted for.

In the dining room in which meals are paid for in advance by monthly or other periods, controls must be set up (1) to provide a means for identifying and certifying students entitled to meal service; (2) to account for food portions prepared and served; (3) to provide a means of receiving payment from guests or others.

Cash register readings should be verified and recorded before and after each meal. These readings should be reconciled against cash. Cash register totals should be allowed to accumulate for the entire accounting period, usually a month, and turned back by a supervisory person other than a cashier. Cashier overages and shortages should be closely observed and remedial steps taken.

#### NUMBER CHECKS

When table service is supported by restaurant checks, the checks should be numbered and all numbers accounted for.

Our fourth area of food cost control is record keeping and reports. In the preceding discussion certain records have been mentioned as required for control and as a source of information for the daily report. These records form the statistical background for compilation of the daily and monthly reports. The purpose of this compilation is justified and fulfilled only if all the essential cost data are made available to the management and to the department heads responsible for the results of operations in time to take corrective measures.

The daily report should summarize essential data of the day's operation for (1) sales, (2) cost of food and food cost ratio, (3) other costs, (4) net result, (5) statistics on total meals served, average check, and special services for parties and banquets. Provision should be made for cumulative totals in sales, food and other costs, and net results for the month. A de-

sirable feature is the provision for presentation of comparable information for the same date or period of the previous year.

The sales section represents the verified receipts reported from the cashier's report and the dietitian's report on meal allowances for employees. The cost of food section is a summary of the day's purchases received direct, plus the storeroom issuances, less returns to the storeroom. The result is the cost of food consumed. The storekeeper's records are an important source of information for this section of the report. The difference between total



sales and cost of food consumed is the gross profit on the day's operations. The percentage of cost of food consumed to total sales gives the food cost ratio.

Based on previous experience, the day's food cost ratio tells the supervising dietitian and the food supervisor whether food cost controls have functioned properly that day. Any unusual deviation from the normally expected ratio calls for prompt investigation and supplementary reports.

Some of the commonly found causes of any one day's poor showing are: (1) increase in market prices without corresponding increase in selling prices; (2) concession in price to special groups; (3) loss on perishable foods; (4) too high kitchen inventories, and (5) errors in storeroom prices.

The section on other costs includes labor charges, supplies, utility charges, laundry, repairs and maintenance. The total of other costs subtracted from gross profit gives the day's net income. Some difficulty may be experienced in recording accurate daily information on costs for services that are billed on a monthly basis. Here, again, the value of past records is admirably demonstrated. Utility costs, for example, may be prorated on a daily basis from the monthly cost of a similar month in the previous year, adjusted, of course, for the current period for such things

as a change in rates. When repair and maintenance service cost is rendered on a monthly basis, likewise, the daily cost may be prorated. Actual costs for laundry, supplies and labor should present no problem. The value of information on estimated costs is not lessened, if the estimates are generous enough for daily purposes.

The statistical section of the day's report is vitally important. Distribution of the day's sales by meals showing the number, dollar value, average check for each meal, and the daily total provides the foods supervisor with a basis for plotting the present trend of service and comparing it with past experience. Then, the foods supervisor is prepared to plot the future trend.

The value of the daily report is lost unless the information is available to the supervising dietitian and foods supervisor at least by noon of the following day.

At the close of the month, the operations for the food service are compiled into a monthly report that consists of an operating statement and a comparative statistical analysis. The operating statement has the same sections as the daily report, namely, (1) sales; (2) cost of food and food ratio; (3) other or operating expenses; (4) net result with ratio of gain or loss.

The sales section is based on information recorded in the business office and hence ties in with the accounting records. If accuracy has been maintained, there should be no discrepancy between the total of daily sales reported in the daily reports and the monthly summary.

#### BASIS FOR COST

Cost of food is based on the physical inventory at the beginning of the month, plus the adjusted purchases during the month, less the physical inventory at the close of the month. The resultant cost of food is also verified by the accounting records, since inventory adjustments and monthly purchases are a part of the business office records. Other costs or operating expenses in the monthly report are actual costs incurred and reflected in the accounting records.

The net income figure, then, in the monthly report reflects reliably the month's results. Here, again, the value of this report is in its timeliness. The information should be available within the first five to 10 days of the month.

The statistical part of the monthly report analyzes both costs and sales.



Costs are shown by totals and daily averages. Costs are divided into three main parts, namely, food cost, labor cost, and other costs. Averages are computed for the food cost per revenue meal and per total meals, including employee meals. Total operating costs are averaged per revenue meal and per total meals. Percentages are found for food cost, total cost, labor and other costs, and for profit or loss.

Sales are shown by totals and daily average. Meals and receipts for meals are distributed by the three daily services. The daily average check by meal and total meals is shown. Comparative data for the same month a year ago or for the previous month are

shown in the same analysis. The information for the statistical analyses is recorded daily on summary sheets so that at the close of the month it is a simple procedure to total columns and to compare averages and ratios.

The ratios and averages become the guideposts for future operation and the measure of current success in comparison with past experience. Staff conferences on ratios can be helpful to betterment of food cost controls.

The final area of control in food cost is personnel. Here, we are not concerned so much with wages or salaries paid as we are with the effect of employees on food costs by inefficiency resulting from poor training or lack of

supervision and food losses caused by waste and pilferage.

One of the biggest problems we have had in our food service is the extent of personnel turnover. Some food service employees have been in continuous service for more than 10 years, but the average employee tenure is less than three years. Some positions change monthly. This tenure problem creates one of training and supervision. I know of no positive remedy or control for personnel turnover. However, it is important to provide training for new personnel in either the preparation or service areas. Waste and failure to observe standards in portioning can be expensive.

## WE USE STUDENT LABOR

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STUDENT LABOR CAN BE REGARDED both as a trial and as a satisfaction. The problem hasn't changed much in 16 years, for in an article by Fern Gleiser and Elsie Ann Guthrie that appeared in the *Journal of the American Dietetic Association* in 1933, "student employees accomplish 20 per cent less work in a given time than full-time employees." In November 1948, V. L. Kretschmer writes in *COLLEGE AND UNIVERSITY BUSINESS* that "a student for one hour does only 60 to 70 per cent of the work of a four-hour shift."

Many places are trying to work out longer hours at a stretch for student workers. If the normal pattern of work is 15 hours a week, perhaps three hours five days a week can be arranged. In some places a student works four hours every other day. It also is possible to work two hours at a stretch every day.

In presenting these ideas, we shall consider primarily the student who is working to earn meals and usually works in a dining hall. By and large, he or she constitutes the main help or problem. We can consider separately the students who work as laborers, truck drivers, ticket sellers, or as baby sitters, as many of them do now.

In discussing student labor, we face (1) the economic factor and its relation to general university policy, and (2) the problem of personnel management.

In regard to the first, we must consider what the general campus attitude, or better, administration attitude, may be. Are departments to provide as many jobs as possible, regardless of efficient operation? Are dining halls in particular to have meal hours that suit the convenience of student workers? Are athletes to be given jobs? Are jobs to be assigned on a basis of need only, regardless of ability or sometimes desire to work? Are we to provide the equivalent of a "work scholarship" by employing more students than are needed to do a job? If this is the policy, it is a little like being told to plan menus regardless of cost, and few of us have ever heard those magic words.

Most of us are expected to use student employees *where, when and how* they best can serve the institution and themselves. This, then, is probably the best answer to the economic factor.

*Where* best we can use students in our food service depends on the type of service. In a dining hall with service, we have waiters or waitresses, bus boys or girls, and dishwashers, machine or hand. We also may use cashiers, checkers, head waiters or waitresses. In some schools it is possible to use students in the kitchen.

If the food service is mostly cafeteria, there are always the counter stations to be filled; soda fountains and snack bars use "soda jerks," student clerks, or, at times, a short order cook.

*When* do we use these students and for how long at a time? All over the country emphasis is being placed on doing away with the work-three-times-a-day-and-eat-three-meals idea. Longer work periods at one time are being developed, permitting freedom for class and social schedules.

Traditionally at Stanford, students were hired for their meals. A schedule was posted, and they came to work three times daily, if necessary. On week ends, when the house count was low, they didn't have to work, but if they wished they might come and eat. During the war, when it was difficult to get dish machine crews, we set up a schedule of 12 hours a week, or two



hours a day worked at one time, to popularize the particular job. It worked out as far as class schedules were concerned and when Stanford Village, the veterans' housing project, was opened three years ago all jobs were set up on that basis.

Now we are attempting to put all jobs in the two men's halls, where we have complete cafeteria service, on that schedule. We hope it will accomplish a more efficient working organization, giving us a breakfast crew, a luncheon crew, and a dinner crew that will work together as a unit, rotating, where it seems advisable, counter, bus and dish machine jobs, and also giving the student an opportunity to be with his whole class or hall during the two meals he is not on duty. We have succeeded in doing this to some extent in our coffee shop as well. Class schedules, we find, can be arranged and so can football practice to permit a student to get to work on time.

#### LONGER SHIFTS BEST

Where it is possible to use students on actual food preparation work, the longer the shift the more efficient the operation. Students can be used to set up desserts, salads and trays of drinks.

Under *how* we shall use student labor the whole problem of personnel hinges, and the two big questions of whom to hire and whom to eliminate.

Here is a simple system suitable for a small school and used at Stanford with its 8000 students.

1. The office of the director of university dining halls serves as the hiring hall for all food service student employees. One of the food directors handles interviews and placements, so that there is a practical knowledge of the problem.

2. Application blanks may be had from the office or requested by mail. These blanks have the usual routine questions and also a place for statement of financial need. When a person is assigned to a job, his application goes to the office of the hall where he is to work. At the end of each quarter a rating sheet attached to the application is filled out. If the student is transferred, the application and rating sheet are sent to the new assignment. If the student does not work, the application and rating sheet go back to the main file in the director's office. Applications stay on file for four years (the usual work span of a student employee). They are then transferred to the storage files.

3. When a former student employee applies, he fills out a class schedule, which is added to his folder. This enables the office to know whether the student has free time for a particular job.

Food service is a never ending cycle. Before the end of the spring quarter a notice is posted in each hall notifying anyone who wishes to be considered for fall work to sign and give his September mailing address. The director of that particular hall then fills in the rating sheet, sees the student personally, or discusses rating with the supervisor. If a student is not to be re-hired, he or she is told so by the director.

A list of necessary jobs is prepared and names of present incumbents are filled in, and the list is sent to the director's office where vacancies are filled. During the summer the mails bring many requests for work and information. Form letters accompany application blanks, and by August 25 we are ready to send out final job notifications.

During the summer applications are weighed, records of the dean of students are consulted, and the decision is based on need and ability to do a job. (Possession of a car is no criterion of need.) Just before September 1 letters are mailed advising students of their



assignments along with a "student employment agreement," which is to be signed and returned.

This takes care of our major problems. Athletes are assigned from the coaches' list and so many places are reserved in each group. They are subject to the same rules as are other students, and any difficulty is reported at once to a representative in the director of athletics' office.

Most jobs are for board, which is \$150 a quarter. That means that a student probably works about 12 hours a week, sometimes less, depending on his "offs." If there are 75 days in the quarter he is getting a pretty fair salary, receiving for 12 hours' work board

for which the nonworking student pays \$14, or about \$1.17 an hour.

Other jobs, such as clerking, are at 75 cents an hour. Cashiering at night is \$1 an hour. In our coffee shop a student works 60 minutes for \$1 of food credit. The worker in a residence hall may get more food for his labor, but the student in the coffee shop may like the choice of food and the type of work there.

#### THE OLD HELP THE NEW

There are mimeographed job breakdowns for specific jobs and general instructions for everyone. When possible, an experienced student works with a new one. Before the first meal in any residence hall, there is a compulsory meeting for new student employees, and a dummy meal is served. Head hashers or waiters are busy the first weeks helping new employees make good.

"Head hashing" is really a social promotion. A student must be a good leader and able to see the point of view of both management and student employee, but the pay is purely nominal.

Certainly, supervision and training of student employees are vital. For the good of the whole group, an unsatisfactory worker cannot be retained in spite of need. Centralized hiring and records do make a student realize the necessity of making good on each job.

We have a responsibility to student workers. We have no right to let them go out into the world with such bad work habits that they lose a job because of their lack of responsibility. We should have specific standards, clear directions, some sort of contract perhaps, and a student should know definitely his rate of pay and his hours. Obviously, the better the working conditions and the better morale among student employees, the better the service will be.

Pay rates of student employees must be in reasonable relation to the pay rates of full-time employees in the same department. In the area of casual labor jobs some attention must be paid to the going pay rate for jobs in the surrounding areas, for general economic conditions have tended to put a floor on wage rates for those jobs.

Students may be used for many jobs besides food service work, including gardening, various kinds of janitorial work, and some office jobs, depending on the strength or skill, the amount of time available, and the policy of the university or school in regard to this matter.

# Questions and Answers

## Replacing Room Keys

**Question:** Our residence halls are utilized by outside conferences during various vacation periods. How can we reduce the cost of having to replace room keys carried away by the conference delegates?—H.S., Ore.

**ANSWER:** If the cost of a key is high, consideration might be given to having a duplicate keyboard for conventions with the usual hotel type of tag attached to such convention keys giving the hall name, address and instructions to place in the nearest mailbox, and guaranteeing postage. Such tags may be purchased at a cost of 14 to 22 cents each in lots of 100.

Ordinary precautions should include instructions to desk attendants and porters to ask all guests for their keys as they check out. When an entire institute checks out of a hall on one day, announcements over the public address system, if the hall is so equipped, will help remind them to turn in keys.

A special study of this problem was made at Wisconsin, since we, too, house a great number of conventions and institutes. We found that the expense of special key tags for conventions was not warranted in our case, for with the cooperation of our employees the key loss is actually not great. The replacement of keys at a cost of approximately 25 cents each does not represent a large expense.

A more serious problem than the cost of replacement seems to be the nuisance of constantly replacing keys and of not always having keys available. We have therefore developed special keyboards for conventions. Our maintenance man is responsible to keep these boards, as well as the regular boards, complete. During convention times he fills in the regular keyboard losses, and during the school term he completes the convention board. In this way a lost key causes no great bother. It is easier to replace a number of keys at one time than to order one every time a key is lost.

Special key deposits for conventions were considered and are used in some

institutions, but in my estimation key deposits are not worth the work they entail and do not represent the kind of service we should be giving these special guests.

In any system of handling keys in residence halls I recommend that the keys be numbered by a code *not* to correspond to the room numbers. Any confusion to guests caused by such numbering may be avoided by instructing each guest as he checks in that his room number is not on his key and by asking him to make note of his room number. Using a code number on keys prevents a dishonest person from easily making use of a lost key. We have experienced a situation in which an entire lock system had to be abandoned because of lost keys in dishonest hands. I strongly recommend marking keys only by codes. The hall name may be indicated. A lost key then represents merely a loss of 25 cents.—LEE BURNS, *director of residence halls, University of Wisconsin.*

## Collecting for Damages

**Question:** Which is preferable practice in covering expenses incurred in damage to residence rooms by students: to require a room "damage" deposit or to bill individual students for actual damage without requiring a deposit in advance?—L.A., Minn.

**ANSWER:** Apparently the discussion about collecting damage fees in advance stems from the bookkeeping or accounting details and expenses involved. It has been our experience that the fee collected in advance covers the usual damage for a year. Of course, there are some cases in which we must bill the student for more money than the deposit covers, but they are rare. Larger schools find it cheaper and easier to collect in advance as there is less bickering over small amounts; *i.e.* key losses, spots on walls, and such things. However, smaller schools know their students more intimately and can have better personnel control. We prefer the "in advance" payment.—WILLARD J. BUNTAIN, *director of dormitories, Northwestern University.*

## Food Purchases

**Question:** What foods are expected to be in short supply for the next six months, so that we may make heavy purchases now to avoid the jump in prices later?—H.C., Vt.

**ANSWER:** For the answer to this question, I had professional help from E. T. Blair, director of purchasing for the S and W Cafeteria chain, who is one of the best men in his field. In his opinion, the prospect of prices going down in the next six months is rather dark. He finds tomato products up 25 per cent over last year; good peas and Blue Lake beans are very scarce; sweet potatoes are higher. Canned corn is short since many companies withdrew from the market when a bumper crop was predicted. The strike situation in Hawaii has practically taken pineapple from the market. This affects fruit cocktail, which is still short. Apples are plentiful and so are pears. Frozen strawberries are scarce and very high.

Turkeys will be higher and so will good beef for about 90 days. Pork should be coming down. Eggs are high and without much relief in sight. Fancy hard flour is seen to be rising in price, with soft flours getting cheaper.

Mr. Blair offered the explanation that most food packers looked for a decline in prices so everyone was advised to carry a light supply. With the consumption of all foods still high, this condition caused a heavy demand with short supplies to meet it.

My advice to any institutional buyer is to purchase for his needs only and not try to make heavy purchases with the intent of beating a jump in prices. My own feeling is that an institution that serves food for a set board rate that cannot be changed should determine the costs of today's prices and charge accordingly. For an institution that sells food by the meal, he should buy in amounts that meet his storage facilities, and if food costs increase, he should increase his food charges also.—T. W. MINAH, *director of dining halls, Duke University.*



# NEWS

**Congress Studying Federal Scholarships . . . Times Survey Finds Colleges in Financial Straits . . . Review Work of 81st Congress . . . Veterans' Children Will Fill Colleges of Future . . . N.E.A. Attacks House Education Committee**

## **Congress Studying Federal Scholarships**

WASHINGTON, D.C.—Congress is beginning to study the question of federal scholarships for college students.

Members of the Senate education and labor committee have asked the legislative reference service of the Library of Congress to sum up existing proposals for federal help to students. The document, prepared by Charles Quattelbaum, education expert for the library, will be published next month as a Senate document under the title, "Federal Scholarship and Fellowship Programs and Other Government Aids to Students."

One section of the document will deal with state scholarship plans and another with foreign experiences in this field.

The proposal discussed at a U.S. Office of Education conference last May will be one of the major plans to be outlined in the document. Under the Office of Education proposal, a total of \$300,000,000 a year would be spent to give financial aid to about a fifth of the present enrollment.

At the same time, Dr. John Dale Russell, director of the Division of Higher Education of the Office of Education, announced that the Bureau of the Budget has approved a trial questionnaire designed to determine the number of scholarships and fellowships available at colleges and universities. The directory, when completed, will probably be published toward the end of 1950.

## **N.E.A. Makes Blunt Attack on House Group**

WASHINGTON, D.C.—"The real road block to the enactment of federal aid to education lies in the House committee on education and labor.

"The leadership of this committee has been encouraged in its technics of confusion and delay by the National Catholic Welfare Conference."

Such is the double-barreled accusation of the N.E.A. in a statement prepared by its legislative commission.

According to observers, the statement is one of the bluntest published by the N.E.A. in recent years. It also accuses Majority Leader McCormack and Representative Lesinski of "faithfully upholding the policies of the National Catholic Welfare Conference."

"The critical issue is the demand of the National Catholic Welfare Conference for federal funds and services to parochial school children," the N.E.A. said.

The demand of services to parochial school children, regardless of state laws to the contrary, is not in accord with long established traditions of the American people, the N.E.A. concluded.

## **Vets' Children Will Swarm Colleges in Future**

WASHINGTON, D.C.—The federal government will eventually spend \$60,000,000,000 for the education of veterans, Carl Gray, V.A. administrator said.

So far only \$8,000,000,000 has been spent.

Administrator Gray also said that the education of veterans is assuring for the future "a steady stream of veterans' children toward schools and colleges, because no veteran who tasted the benefits of college education or training will want his child to be without them."

In an over-all look at veterans' education, Mr. Gray added that veterans are studying in 66 foreign countries "bringing a little bit of America to all the world's far-away places."

## **V.A. Administrator May Have Powers Clipped**

WASHINGTON, D.C.—Powers of the administrator of veterans affairs "as educational dictator" will be sharply clipped if the Taft amendments to the G.I. bill on education pass the House at the next session of Congress.

The Senate has already approved the measure, S. 2596, known as Veterans Education and Training Amendments of 1949.

The bill seeks to correct some of the "arbitrary actions" on the part of V.A. which educators have attacked. Its most immediate aim is to prevent the recurrence of regulations such as those issued in Instruction 1-A. This instruction has since been canceled. Senator Taft believes, however, that Congress should write into law limitations on the administrator's power regarding change-over of courses, avocational courses, and his right to approve institutions for G.I. study.

Under the bill as passed by the Senate:

1. The administrator of veterans affairs would not have power to deny any veteran his right to select courses he wants, whether such courses are full-time, part-time or correspondence. The bill assures the veteran's right to determine for himself the courses he wants to pursue.

2. As for the administrator's right to limit "course-hopping," the bill provides: "The V.A. may require advisement for the veteran in case he decides to take a new course in an entirely different general field. The administrator, however, shall have no right to refuse approval to a different course or an additional course in the same general field.

3. New institutions or new courses must have been in operation for at least one year before becoming eligible under the G.I. bill. However, this



prohibition would not apply to any course in any public school or other tax supported school or college or to branches of a parent institution.

"It is clearly intended that the administrator shall not disapprove a new course in an established institution simply because the institution adopts and offers such a course," the bill says. "Furthermore, the administrator must approve a new institution if a state agency certifies that such an institution is needed to meet the needs of veterans."

4. The bill again itemizes avocational courses to include dancing, photography, gliding, bar tending, personality, entertainment, music, public speaking, sports and sports officiating. However, "No such courses shall be considered avocational if the veteran submits justification that it will contribute to his present or contemplated job goal." In other words, a veteran has a right to train for bar tending if that will become his source of livelihood.

## Loans for Architectural Planning Continued

WASHINGTON, D.C.—State and municipally supported institutions of higher learning are eligible for interest-free loans to prepare advance architectural and engineering plans for building projects, under a new law signed by President Truman last month.

The legislation authorized an extension of the nonfederal public works planning program for two more years. The general services administrator received \$25,000,000 for immediate allocation to public bodies.

Applications should be made to General Services Administration regional offices. Plans for housing construction are not authorized by the legislation.

Purpose of the law is to assure a reserve shelf of planned public works in case an economic depression requires government pump-priming. For the time being, however, "the making of loans does not in any way commit Congress to undertake the construction of the public works planned with federal funds."

"Loans made under this act to any public agency must be repaid without interest if and when the construction of the public works is started," the

law says. It provides further: "If the construction of the public works is not undertaken within three years after the loan has been made and the administrator of general services shall determine that the public agency has not acted in good faith either in obtaining the loan or in failing to undertake or start the construction of such public works, the administrator shall demand prompt repayment. . . . No loan will be made for any individual project unless it conforms to an overall state, local or regional plan approved by state, local or regional authority."

## Supreme Court Refuses to Review Student Expulsion

WASHINGTON, D.C.—The U.S. Supreme Court has refused to review the case of a student expelled from the University of Michigan for activity in American Youth for Democracy. The A.Y.D. had been named by the attorney general as an allegedly Communist-front organization.

Because of the Supreme Court's decision, "a state owned and administered land-grant college may impose disciplinary restraints upon students in connection with off-campus activities . . . and expel students for failing to conform to such restraints."

The student involved was James Zarichny. He organized and attended an off-campus meeting of the A.Y.D., despite an earlier warning from university authorities not to carry on A.Y.D. activities. His expulsion took place after the student council had withdrawn recognition from the A.Y.D. as a campus group.

## To Cooperate With Wayne on Cancer Diagnostic Clinic

DETROIT.—Wayne University officials have announced the establishment of a cancer diagnostic and teaching clinic devoted to the instruction of medical graduates. This has been made a cooperative program of the American Cancer Society, Detroit Institute of Cancer Research, and Wayne University College of Medicine.

Facilities for teaching 50 physicians a year the special techniques helpful in cancer detection will be provided under the plan that has recently been given formal approval by the Detroit Board of Education upon recommendation of President David D. Henry.

## Review of Work Accomplished by the 81st Congress

WASHINGTON, D.C.—Here is the record of the first session of the 81st Congress as it affected legislation in which educators have an interest.

Enacted were the following measures:

1. Requirement that applicants for fellowships with the Atomic Energy Commission be investigated by the F.B.I.

2. Aid to Chinese students now in American universities who find themselves in financial need because of the defeat of Nationalist forces in China.

3. Permanent surplus property program for schools and colleges, authorizing donations from military and civilian federal agencies.

4. Advance planning of nonfederal public works.

5. Resolution rejecting the President's proposal to create a welfare department, which was to include the Office of Education as one of the subordinate units.

The Senate passed bills authorizing aid to medical education and health professions; creating a National Science Foundation, and softening the Veterans Administration Instruction 1-A on a veteran's right to choose and change courses of study. The House will consider these three measures at the next session of Congress.

Also awaiting House action are the Senate-passed Thomas-Taft bill for federal aid to public schools; aid for public school health services, and for public school construction. Controversies involving religious and "statist" issues kept the House from acting on the last three public school measures at this session.

In one of the session's most decisive votes, the House broadened the social security program to include educational workers. The Senate is expected to conduct intensive hearings next year before agreeing with the House vote.

Carried over for the next session were bills authorizing loans for construction of college housing; creating labor extension services; financing public library demonstrations, and beginning worldwide sharing of technical skill and knowledge with underdeveloped countries, as proposed by President Truman's Point 4 Plan.

## Fee Suits Against V.A. Dismissed by Court

WASHINGTON, D.C.—The Veterans Administration has a right to govern fees paid to private schools and colleges for training veterans under the G.I. Bill of Rights, a federal district court ruled.

Judge M. F. McGuire dismissed the lawsuits of two private schools, which had attacked V.A. regulations.

The regulation required all institutions training veterans to charge tuition at the "customary" rates. When institutions have been established since June 22, 1944, the V.A. regulations said: There is no "customary" rate and, in lieu of it, the schools must negotiate "fair and reasonable" rates of tuition.

The Metropolitan Training Center of New York City and the Michigan Technical School of Detroit attacked the regulation in the District Court, seeking an injunction against the Veterans Administration.

Federal Judge McGuire ruled that the suit against the V.A. was a suit against the United States. Therefore, the court has no jurisdiction because the government has not consented to be sued.

V.A. officials estimated that the court's action saved "at least \$25,000,000" and probably much more for the government for the period between July 1, 1948, when the V.A. tuition regulations became effective, and Aug. 24, 1949, when Congress wrote them into law.

## Negro Presidents in South Commend Whites

WASHINGTON, D.C.—Presidents of Negro land-grant colleges commended the white educational authorities in four Southern States for admitting Negro students to white graduate and professional schools. The states lauded were Arkansas, Kentucky, Oklahoma and West Virginia. Delaware also was mentioned in the commendation.

The action was taken at the final session of the annual conference of Negro land-grant college presidents, held in October.

In previous sessions, the college executives laid plans for improving guidance and counseling services for Negro college students. Their decision was that Negroes "should not be

trained for the status quo but should be directed to an ever widening circle of professional, business and industrial jobs."

Lawrence A. Davis, president of Arkansas State College, was reelected head of the Negro land-grant college association, which represents 17 institutions serving 40,000 students in the South.

Creation of a National Board of Education, independent of any government agency, is "among the first crucial needs in education today," says the Council of Chief State School Officers. . . . Bricks from the White

House (also pieces of molding and bannisters) will become available to colleges and universities as mementos. The Executive Mansion is being remodeled, and some officials seem to think that educational institutions would like to have "authentic souvenirs" from the old White House.

Small colleges "operating on a shoestring" should close their doors in order to save the best of our colleges and universities, says Agnes Meyer, Washington pundit and a former member of the President's Commission on Higher Education. . . . Business courses lead in enrollment among veterans in schools and colleges, a V.A. tabulation shows.

## WASHINGTON AT A GLANCE

WASHINGTON, D.C. — The U.S. Department of Justice filed a brief with the Supreme Court attacking the 50 year old doctrine of "equal but separate" treatment of Negroes in state supported schools and colleges. The department stated that separate facilities can never be equal. . . . A report of the Conference on Discrimination in College Admissions held in Chicago, November 4, will be available from the American Council on Education in December.

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## Times Survey Finds Colleges in Financial Straits

NEW YORK.—According to a survey made by the *New York Times* under the direction of Dr. Benjamin Fine, its education editor, many American colleges and universities are operating on a deficit basis this year.

Of 646 colleges covered in the *Times* survey, 20 per cent report that they are in serious financial straits. Of these, 96 per cent are finding it much more difficult than it was a year ago to raise money either from alumni campaigns or from appeals to the public.

Tuition rates, the survey shows, are 52 per cent higher on an average than they were in 1941-42. Only 3 per cent of the colleges reached report that they are planning to increase tuition. The other 97 per cent believe that the rates cannot go higher under present conditions because of the fact that worthy students will be kept out.

## Another Four Million for Stranded Chinese

WASHINGTON, D.C.—The U.S. Department of State announced that an additional \$4,000,000 has been made available for emergency assistance to Chinese students in their undergraduate and graduate studies in accredited American colleges and universities.

Grants may cover tuition, maintenance and travel. Each student will be urged to achieve an approved educational objective and to return to China as soon as practicable.

"While the government of the United States has no responsibility for providing assistance to foreign students in this country," the State Department said, "recent political and economic developments in China justify the continuation of this program, originally requested by China."

To qualify for a grant the student must be a citizen of China; he must have been engaged in a course of study in academic year of 1948-49; he must be in need of financial assistance, and he must be and remain in good academic standing.

Students must apply for grants through officials of their university. In turn, college and university officials should direct all correspondence relative to the grant to the Division of Exchange of Persons, Department of State, Washington 25, D.C.



## NEWS

### F.C.C. Considering Plea of Educators for Television Channels

WASHINGTON, D.C.—Washington educators are looking forward to the day when most colleges and universities will be equipped with television and FM radio.

Before the Federal Communications Commission last month educators argued their right to stake out a claim to television channels for exclusive school and college use. They asked the F.C.C. to set aside 10 channels of ultra-high-frequency (UHF) television for this purpose. These UHF channels, although not yet in use, may soon be taken over by commercial broadcasters. The purpose of the educators' testimony before the F.C.C. was to guarantee that, when colleges and universities are ready to use television, they will have at their disposal the air waves to do so.

In a separate action, the Office of Education once more told colleges and universities that it requires "only a few thousand dollars" to construct a 10 watt FM broadcasting station. A new budget recommended to educational institutions planning to develop broadcasting calls for between \$5000 and \$7000.

Federal broadcasting officials said that an institution should begin modestly by buying essential equipment only. This includes program-control console, microphones and stands, FM fidelity recording equipment, recorded-program reproducing equipment, program-monitoring and talk-back equipment, and studio signal lights and control relays. The \$7000 does not provide for a program director because "every institution has enthusiastic amateur producers, writers and directors" among its faculty and student body.

The recommended budget was worked out by Dr. R. R. Lowdermilk, specialist in educational uses of radio of the federal Office of Education.

### Urge Colleges to Ban Bias Groups

CHAMPAIGN-URBANA, ILL. — The National Student Association, at its recent annual convention, urged that colleges ban new student groups that would discriminate on racial, religious or political grounds. Proposals to

erase discrimination from campus organizations were agreed upon after two days of debate by the 1000 delegates. None of the proposals was accepted unanimously.

Delegates at the association's annual meeting suggested that existing student groups that practice discrimination should abide by the following plan: (1) Have periodic meetings of students on each campus to study efforts being made to eliminate discrimination, and (2) have the student government and any offending groups jointly determine what steps can be taken to reduce bias farther.

### No Pay Raise for Education Commissioner

WASHINGTON, D.C.—More than 250 top U.S. executives will get a pay raise under a bill signed by President Truman last month. The U.S. commissioner of education is not in that group.

The government executive pay raise bill will increase the salaries of cabinet officers from \$15,000 to \$22,000; undersecretaries and agency heads from \$10,000 to \$17,500, and a large group of U.S. commissioners from \$10,000 to \$14,000.

Pay of Oscar Ewing, federal security administrator, will be raised from \$12,000 to \$17,500; the commissioner for social security, one of the officers in the Federal Security Agency, from \$10,000 to \$14,000.

Educators in Washington have urged that the U.S. commissioner of education be included in the bill. Congress did not see fit to comply.

### Hartwick Has Large Grants for Student Nurses

ONEONTA, N.Y.—Henry J. Arnold, president of Hartwick College, announces establishment of a scholarship fund in cooperation with the Mary Imogene Bassett Hospital at Coopers-town, which will provide tuition grants up to a total of \$3500 for those needing financial aid in order to complete the four-year collegiate nurse training program.

Under the terms of the agreement, the hospital is to provide two years of basic clinical training for the student nurses who have completed their first year at the college. The college is also affiliated with the Columbia-Presbyterian Medical Center.

### Tead Seeks End to "Neutral" Attitude in Teaching

SWARTHMORE, PA.—In a recent speech at Swarthmore College, Dr. Ordway Tead, chairman of the Board of Higher Education of New York, stated that college teachers should cease being "neutral, impassive, uncommitted and tentative about the basic tenets of living."

Dr. Tead pointed out that "the good teacher tends to invest with a sense of ultimate meaning and humane significance that segment of knowledge with which he is especially intimate. And his investment with value of that which he would teach is an effort philosophic in essence." He declared that it is every teacher's responsibility to advance a way of life "which unifies direction and infuses with moral meaning every experience which men encounter."

### Indiana U. Builds With State Funds

BLOOMINGTON, IND.—Bids have been received by Indiana University for construction of a general classroom building on the Bloomington campus and a research wing to the James Whitcomb Riley Hospital for Children on the medical center campus at Indianapolis. The two projects will be the first permanent university buildings to be erected from state funds since the war.

J. A. Franklin, university vice president and treasurer, commented, in announcing the bid, that low construction offers were 30 per cent below cost estimates in the case of the classroom building and within the cost estimates for the research structure.

### Seeks License to Operate FM Station

EVANSVILLE, IND.—Evansville College has been authorized by its board of trustees to make formal application to the Federal Communications Commission for license to establish and operate an FM radio station on the campus. As now planned, the station will operate on 2000 watts of power, which will give an adequate signal to cover the Tri-State area of Illinois, Indiana and Kentucky, from which Evansville College attracts most of its students.



## Student Government at Illinois Tech Grows in Power

CHICAGO.—As a result of a recent revision of the student association constitution at Illinois Institute of Technology, greater responsibility will be given to student leaders in the future.

According to an announcement by Clarence E. Deakins, dean of students, "during the coming year only one faculty member and the dean of students will sit on the board of the Illinois Tech Student Association."

The student association, which acts as liaison between administration and student body, has jurisdiction over 79 campus societies. It is a court of appeals for student problems and can investigate management of any student activity. It has complete freedom in numerous fields—organizing and controlling interclass relations, class customs, and privileges; supervising all college elections; determining the use of student activity funds with the right to audit books of any student group. Students will fill most of the posts on the 15 man panel. "It is a radical change from the days when the students had a slim two-man majority," Dean Deakins said.

## United States Bars Entry of Toronto Professor

BRYN MAWR, PA.—According to an announcement by Dr. Katharine E. McBride, president of Bryn Mawr College, a visiting professor from the University of Toronto has been barred from the United States by immigration officials. Dr. McBride said that, as a consequence, the lecture series scheduled for Dr. Barker Fairley has been canceled.

Under an act of 1918, immigration officials do not have to give a reason for barring an individual from entering the country. Dr. Fairley is vice president of the Canadian Council of American-Soviet Friendship; his wife was ordered out of this country while attending the Cultural and Scientific Congress for World Peace in New York last March.

## Harvard Law to Admit Girls

CAMBRIDGE, MASS.—Beginning in the fall of 1950, the Harvard Law School will admit qualified women applicants. This is the first time in the 132 year history of the institution that women have been accepted as students at the institution.

## N.Y.U. Leases Old Hotel for Ousted Tenants

NEW YORK.—New York University's school of law recently reported that it has taken over temporary operation of the old Lafayette Hotel in the Washington Square area in order to provide living quarters for tenants in a block that will soon be demolished in order to provide a new Law Center building for the university.

For many months, New York University has been involved in a controversy with tenants who have resisted efforts to oust them from the Square in order to make room for the new building. In order to accommodate the tenants so affected, the university will temporarily operate the Lafayette Hotel.

## Houston Houses Administration

HOUSTON, TEX.—The biggest construction project now reported from the University of Houston is the new \$5,000,000 Ezekiel Cullen Administration Building.

To be finished in native Cordova limestone in harmony with other permanent buildings on the campus, it will be modern in every detail.

## \$50,000,000 Gift Refused by College

NATCHEZ, MISS.—Jefferson Military College was announced as the recipient recently of \$50,000,000 for its endowment fund from George W. Armstrong Sr., provided it agreed to some "racial superiority" restrictions set by the donor.

The board of trustees refused to accept the restrictions of the gift, whereupon the donor withdrew his offer. Allen J. Armstrong, son of the donor and business manager of the 147 year old military prep school, announced he would resign as a result of the negative vote of the trustees in regard to the endowment gift.

The National Conference of Christians and Jews telegraphed congratulations to the school board of trustees, saying in part:

"You have the profound gratitude of the people of our country for refusing to prostitute your college and make it a propaganda center. Thank God American colleges and universities are not for sale."

## GIFTS AND BEQUESTS

• Hartwick College, Oneonta, N.Y., has announced receipt of a gift of \$12,296 from the estate of James Hetherington of Clay, N.Y.

• Southern Methodist University, Dallas, Tex., reports that a gift of \$250,000 from Mrs. George L. Peyton of Mexia, Tex., will make possible the erection of a girls' residence hall estimated at a cost of \$460,000.

• Meharry Medical College, Nashville, Tenn., has received a grant of \$30,385 from the National Cancer Institute for construction of an animal hospital to be used in connection with its cancer research program.

• Pfeiffer Junior College, Misenheimer, N.C., received a gift of 550 shares of William R. Warner and Company, which represents stock from the estate of Mrs. Gustavus A. Pfeiffer. The college will receive one-twelfth of the residuary estate of Mrs. Pfeiffer.

• Philander-Smith College, Little Rock, Ark., has received a special grant of \$25,000 from the General Education Board of New York for use in its campus expansion program.

• Fenn College, Cleveland, recently dedicated its new \$500,000 Claud Foster Engineering Building, which was made possible by the outright gift of half a million dollars from Claud Foster, retired Cleveland industrialist.

• Wayne University, Detroit, has announced the receipt of \$1,000,000 from the Kresge Foundation for the erection of the Kresge Science Library Building. The new building will be the first structure at Wayne University financed by private philanthropy.

• Wittenberg College, Springfield, Ohio, has announced the receipt of a \$100,000 endowment gift from Mr. and Mrs. Clarence L. Catherman of Orlando, Fla. Announcement of the gift was the last official act of Dr. R. E. Tulloss, president of the college for 29 years, inasmuch as the announcement was made on the day he retired.

• Cornell University, Ithaca, N.Y., has raised \$8,506,000 in its campaign for \$12,500,000, according to a recent announcement by John L. Collyer, president of the B. F. Goodrich Company and national chairman of the Greater Cornell Fund.

• University of Chicago announced that Reynolds Metals Company and

## NEWS

Procter & Gamble Company have become industrial sponsors of the University of Chicago's \$12,000,000 basic atomic and metals research program. Each firm will contribute \$20,000 a year toward the support of the atomic program. These two recent additions bring the number of industrial sponsors of the research program, which also includes the Institute for Nuclear Studies, to 20.

### NAMES IN THE NEWS



G. L. Kirk

**Dr. Grayson L. Kirk**, professor of international relations and director of the European Institute at Columbia University, has been named provost of the university. He assumed his duties November 1, succeeding **Albert C. Jacobs**, who resigned recently to become chancellor of the University of Denver.

**George C. S. Benson**, president of Claremont Men's College, Claremont, Calif., has been named provost to succeed **Frederick Hard**, president of Scripps College. The executive position among the presidents of the three colleges is rotated in line with administrative policy.

**Rev. Lawrence A. Walsh**, former dean of Fordham University at New York, has been named to the newly created office of provost. Among the duties of the new post will be coordination of the various schools and colleges of the university and supervision of campus facilities and public functions.



Fr. L. A. Walsh

**Dr. Martha B. Lucas**, president of Sweet Briar College, Sweet Briar, Va., will resign her post next June 30. Dr. Lucas plans to do some writing in the field of philosophy of religion.

**Dr. Charles Marston Lee**, acting president of Geneva College, Beaver Falls, Pa., since the death of the former president, **Dr. McLeod Milligan Pearce** in



Charles M. Lee

November 1948, has been named president. **Robert M. Hemphill** has been appointed assistant business manager of the college. **W. Stewart McCready** is the business manager.

**Clarke Smith** has been named as secretary of the regents of the University of Wisconsin; he will succeed **A. W. Peterson** who resigned that position in order to give more time to his duties of vice president of business and finance and trust officer of the university.

**Dr. Peyton Nalle Rhodes**, vice president of Southwestern at Memphis, Tenn., has been named to succeed **Dr. Charles E. Diehl** in the presidency. Dr. Diehl, after 32 years of service as president, was named president emeritus last June.

**Evangeline Lewis** has been appointed headmistress of the Samuel Ready School for Girls at Baltimore. Miss Lewis was formerly principal of the All Saints School at Sioux Falls, S.D.



E. W. Nelson

**Ernest Wilmer Nelson**, former general manager of the Indo-China Division of Standard-Vacuum Oil Company, has been named controller of Upsala

College at East Orange, N.J. During his 30 years with Standard Oil, Mr. Nelson served in a managerial capacity in posts throughout the Far East. He was interned by the Japanese at Hong Kong from December 1941 to July 1942 and was returned to the United States on the *Gripsholm*.

**Augustin Jereza** has been named president of the University of Southern Philippines at Cebu City.

**James D. Phillips**, business manager of the University of Wisconsin from 1921 to 1938, died recently at the age of 81 in Los Angeles. Mr. Phillips was president of the Central Association of College and University Business Officers in 1925.

## DIRECTORY OF ASSOCIATIONS

### Association of College and University Business Officers

#### Central Association

President: **Fred W. Ambrose**, State University of Iowa; secretary-treasurer: **L. R. Lunden**, University of Minnesota.

#### Eastern Association

President: **Boardman Bump**, Mount Holyoke College; secretary-treasurer: **Irwin K. French**, Middlebury College.

Convention: December 4-6, Chalfonte-Haddon Hall, Atlantic City, N.J.

#### Southern Association

President: **C. B. Markham**, Duke University; secretary-treasurer: **Gerald D. Henderson**, Vanderbilt University.

#### Western Association

President: **Alf E. Brandin**, Stanford University; secretary-treasurer: **James R. Miller**, University of California.

#### Schools for Negroes

President: **A. I. Terrell**, Winston-Salem Teachers College; secretary: **L. H. Foster Jr.**, Tuskegee Institute.

### Association of College Unions

President: **Donovan D. Lancaster**, Bowdoin College; secretary-treasurer: **Edgar A. Whiting**, Cornell University; editor of publication: **Porter Butts**, University of Wisconsin.

Convention: April 26-29, 1950, New Ocean House, Swampscott, Mass.

### Association of Physical Plant Administrators of Universities and Colleges

President: **L. L. Browne**, University of Arkansas; secretary-treasurer: **A. F. Gallistel**, University of Wisconsin.

Convention: May 1950, Yale University, New Haven, Conn.

### American College Public Relations Association

President: **E. Ross Bartley**, Indiana University; secretary-treasurer: **Edward P. Vonderhaar**, Xavier University, Cincinnati.

### College and University Personnel Association

President: **George W. Armstrong**, University of Pennsylvania; secretary-treasurer: **Ruth Harris**, University of Illinois.

### National Association of College Stores

President: **Herbert Hays**, Berea College; executive secretary: **Russell Reynolds**, Box 58, 33 West College Street, Oberlin, Ohio.

### National Association of Educational Buyers

President: **Holger B. Bentsen**, George Williams College; secretary-treasurer: **Bert C. Ahrens**, 45 Astor Place, New York, N.Y. Convention: May 3-6, 1950, Houston, Tex.

# PRODUCT INFORMATION

## Index to "What's New"

Pages 76-79

**Key**

532 American Optical Co.  
Slide Projector

533 Remington Rand, Inc.  
"Push-Button" Record Keeping

534 Turkey Growers Federation  
Tur-King Boned Turkey

535 Automatic Pencil Sharpener Co.  
"Selector" Pencil Sharpener

536 Frigidaire Division  
Bulk Ice Makers

537 The Cleveland Range Co.  
One-Compartment Steamer

538 Clark Linen & Equipment Co.  
Air Conditioned Pillow

539 Foam-X Co.  
Fungicide

540 Norris Dispensers, Inc.  
Refrigerated Milk Dispenser

**Key**

541 The Nestle Co., Inc.  
Soluble Tea

542 Day & Night Div.  
Panelray Heater

543 Ditto, Incorporated  
D-10 Liquid Duplicator

544 C. A. Dunham Co.  
Wall Type Convactor

545 Market Forge Co.  
Counter Model Steam-It

547 Houston Blow Pipe & Sheet Metal  
Works  
Combination Mower and Cleaner

548 Windsor Wax Co., Inc.  
Double-Action Floor Wax

549 Allied Radio Corp.  
Player-Recorder Combination

**Key**

550 Cordley & Hayes  
Water Coolers

551 Precision Scientific Co.  
Laboratory Water Still

552 Burgess Battery Co.  
Equipment Identification

553 General Fireproofing Co.  
Aluminum Filing Shelf


554 Johns-Manville  
"Asphalt Tile" Folder

555 American Floor Products Co.  
"Do's and Don't's of Mat Care"

556 The Quaker Oats Co.  
Quantity Recipe Cards

557 Pittsburgh Corning Corp.  
"Mark of a Modern Building"

558 The Arco Co.  
"Optonic Color Compass"

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# Index to Products Advertised

Key	Page	Key	Page	Key	Page
583 Adams & Westlake Company Aluminum Windows	41	600 Heinz Co., H. J. Institutional Food	45	616 Morilla Company, Inc. Artists' Materials	58
584 Aluminum Cooking Utensil Company Aluminum Pitchers	49	601 Hillyard Sales Companies Floor Maintenance	64	617 Multi-Clean Products, Inc. Floor Maintenance	75
585 American Floor Surfacing Machine Co. Floor Maintenance	70	602 Hotpoint, Inc. Kitchen Equipment	3rd Cover	618 National Lock Company Locks	46
586 Ampco Corporation Movie Projector	51	603 Huntington Laboratories, Inc. Floor Maintenance	68	619 Neumade Products Corp. Film Racks	58
587 Bausch & Lomb Optical Company Microscopes	73	604 Insurance Company of North America Companies Trust Fund Booklet	54	620 New Castle Products, Inc. Movable Walls	74
588 Blank & Co., Inc., Frederic Wall Covering	80	605 Kellogg Company Institutional Food	47	621 Perry, Inc., Parker D. Institutional Tableware	46
589 Carrom Industries, Inc. Institutional Furniture	71	606 Kewaunee Mfg. Co. Laboratory Equipment	50	622 Peterson & Company, Leonard Laboratory Furniture	74
590 Crane Company Plumbing Equipment	42	607 Kimble Glass Laboratory Glass	61	623 Powers Regulator Co. Thermostatic Shower Mixers	64
591 Dick Company, A. B. Duplicator	55	608 Knight, Richard C. Student Health Plan	66	624 Presto Recording Corp. Recording Equipment	59
592 Dudley Lock Corporation Locks	70	609 Lawson Associates, Inc., B. H. Institutional Finance	63	625 Ric-wil Company Insulated Piping	87
593 Finnell System, Inc. Floor Maintenance	4th Cover	610 Leggs Co., Inc., Walter G. Floor Maintenance	52	626 Saxauer Mfg. Co., J. A. Faucet Washers	74
594 Franklin Research Company Wood Seal	66	611 Maple City Stamping Co. Steel Folding Chair	70	627 Sikes Co., Inc. Institutional Furniture	43
595 General Fireproofing Company Aluminum Chairs	65	612 Maxim Silencer Company Snow Thrower	62	628 Simmons Company Dormitory Furniture	44
596 GoldE Manufacturing Company Projection Machine	58	613 Medart Products, Inc., Fred Scoreboards	69	629 Sloan Valve Company Flush Valves	56
597 Hamilton Manufacturing Co. Laboratory Catalog	50	614 Michaels Art Bronze Co., Inc. Exhibit Cases	68	630 Smooth Ceilings System Ceiling Building Method	62
598 Harold Supply Corporation Tray Carriage	70	615 Minneapolis-Honeywell Regulator Co. Temperature Controls	72	631 Universal Bleacher Co. Folding Bleachers	50
599 Hauserman Co., E. F. Movable Steel Interiors	53			632 Vestal, Inc. Floor Seal	54

November, 1945

ask the manufacturers, indicated by the numbers I have circled, to send further  
ature and information provided there is no charge or obligation.

## WHAT'S NEW

540 548 556  
541 549 557  
542 550 558  
543 551  
544 552  
545 553  
546 554  
547 555

## ADVERTISEMENTS

583 591 599 607 615 623 631 639  
584 592 600 608 616 624 632  
585 593 601 609 617 625 633  
586 594 602 610 618 626 634  
587 595 603 611 619 627 635  
588 596 604 612 620 628 636  
589 597 605 613 621 629 637  
590 598 606 614 622 630 638

636 Welrus Manufacturing Co.  
Institutional Furniture 58  
637 Weston Electrical Instrument Corp.  
High Frequency Analyzer 60  
638 Wickwire Spencer Steel Div.  
Wire Fence 62  
639 Williams Iron Works, Inc.  
Steel Grandstands 75

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**EASY REPLACEMENT!** To renew one of these Dial-eze faucets, you just slip out the old cartridge unit, slip in the new. One unit fits all Crane faucets.



**RESISTANCE TO WEAR!** Hundreds of schools the country over can testify that Crane school fixtures stand up through year after year of tough, regular usage.



**QUICK CLEANING!** Crane school fixtures are easily kept shining like new. Crane wall-mounted closets make thorough cleaning easy.



# CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO 5

**PLUMBING AND HEATING  
VALVES • FITTINGS • PIPE**

**NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS**





INVITING *and* RESTFUL!

## SIKES COLONIST CRAFT

EARLY AMERICAN FURNITURE

FOR TEACHERS' LOUNGES, REST ROOMS, STUDENT  
CENTERS AND DORMITORY SOCIAL ROOMS

The informality of these pioneer American designs is very appropriate for rooms in which students or teachers gather for moments of relaxation and sociability. The sunny mellowness of the famous Sikes Butterscotch Maple finish is as pleasing as it is practical for easy maintenance.

Here is furniture that never seems to grow old. Its sturdiness means freedom from costly repairs and replacements. Its authenticity of design is ageless . . . and it fits in so beautifully with most decorating schemes!

Write for photos and specifications . . . and please state uses for which furniture is desired. There is Sikes Furniture for practically every type and style of college building.

**SIKES** furniture

FOR DORMITORIES, DINING ROOMS, LIBRARIES,  
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# Straight A's

**FOR SIMMONS DORMITORY  
FURNITURE**

REPORT CARD	
BEAUTY	A
DURABILITY	A
ECONOMY	A



Yes, Simmons *all-steel* furniture rates an "A" on all three... Beauty, Economy, Durability. Beauty... the quiet, dignified character of "home." Durability... made of *steel* to withstand the hard, continuous abuse demanded of dormitory furniture. And Economy... the savings of longer life.

For that "homey" feeling, you have your choice of warm, cheerful colors...rich grained or two-toned combinations. The famous *Simfast* finishes resist heat, sunlight and liquids...won't chip, mar, peel or crack!

And only Simmons *all-steel* furniture offers...one-piece fireproof construction, electrically welded supports, *smooth-operating* drawers that never warp or stick, never fall out...qualities of strength, durability, service.

But see for yourself...see your nearest Simmons distributor or write directly to

*Illustrated above, Room No. 146. By combining a Simmons Double Desk and Double Deck Bed, this attractive dormitory room utilizes all available space. Furniture illustrated: Double Bunk DB-930, Double Desk F-142-12, Chest F-142-4, Mirror FM-61, Chair F-711, Arm Chair F-762.*



*Double Deck Bed demounts to make two single beds.*

**SIMMONS COMPANY**

## CONTRACT DIVISION

### Display Rooms:

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San Francisco 11, 295 Bay St. • Atlanta 1, 353 Jones Ave., N.W.



## *Salad Magic*

**THAT BUILDS A REPUTATION!**

**G**OOD salads are one sure signpost of a good place to eat. And since your "salad reputation" depends so greatly on the dressing you use, it is false economy to top good salad makings with less than the best!

- Prepared from famous Heinz White Vinegar, blended with selected eggs, fine oil and other choice ingredients, Heinz 57 Salad Dressing points up the flavor of your salads to perfection.

- Ask your Heinz Man to show you the many advantages of using famous Heinz 57 Salad Dressing.

**Ask Your Heinz Man About**

# HEINZ

# 57

## Salad Dressing



# 6 reasons why Boontonware is BEST

for School & College



①

Cuts breakage costs from 80% to 98%. Pays for itself.

②

Four permanent pastel colors: BLUE, GREEN, YELLOW and BUFF. Boontonware brightens the room; makes food appear more appetizing.

③

Molded of Melmac\*. Odorless, tasteless, non-toxic. Unaffected by grease.

④

Light to handle; easy to stack. Makes almost no clatter.

⑤

Unharmed by food acids, standard dishwashing methods or detergents.

⑥

Insulating quality keeps food hot or cold throughout the meal.

\*Reg. U. S. Pat. Off.

**Boontonware**  
*It lasts and lasts and lasts*

Available at  
leading Hotel  
and Restaurant  
Supply Houses.

NATIONAL DISTRIBUTOR  
**PARKER D. PERRY, INCORPORATED**  
729 Boylston Street, Boston 16, Mass.

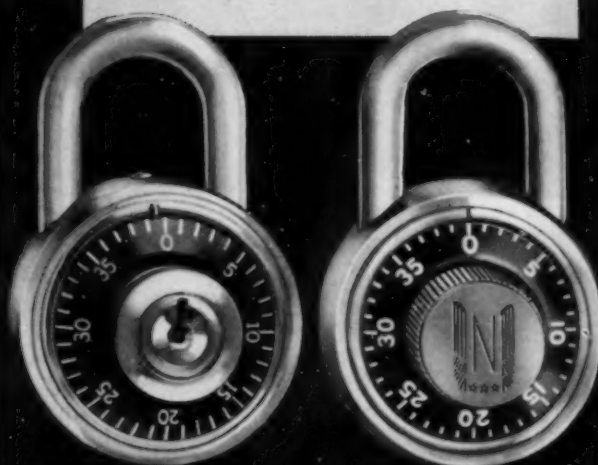
Names of dealers serving your area  
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## THE PROBLEM!

TO SECURE LOCKER LOCKS  
THAT ARE DEPENDABLE,  
DURABLE, EASY TO USE, TO  
CONTROL . . . AND ASSURE  
LOW COST PROTECTION

## THE ANSWER!

SELF-LOCKING  
COMBINATION LOCKS  
BY NATIONAL LOCK



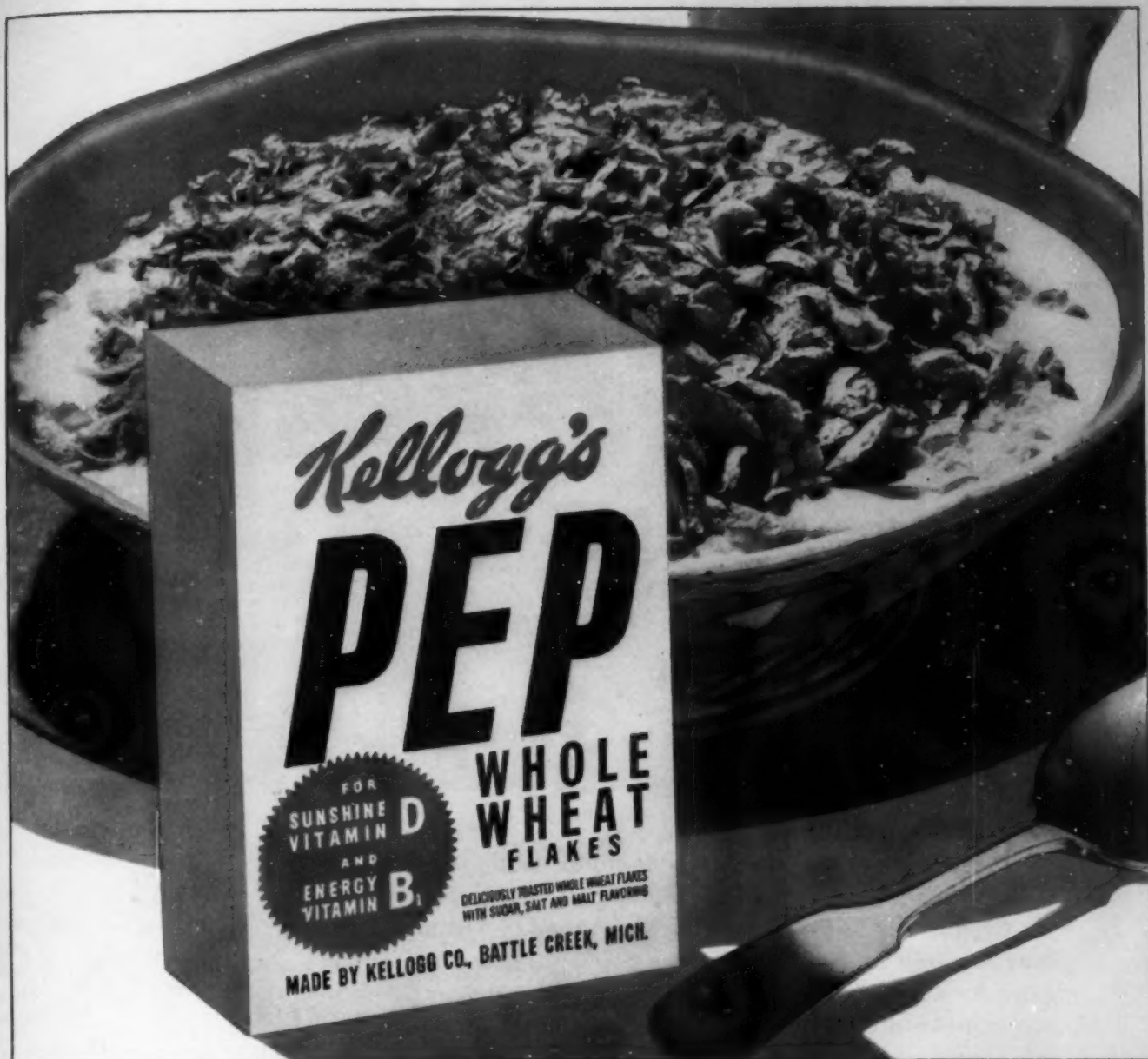
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Available with or without masterkey feature, self-locking, combination NATIONAL LOCKS provide everything you could possibly desire in dependable protection. These locks have double steel construction . . . black enamel dials with white gradations for easy visibility . . . heavy duty shackles . . . and other excellent refinements. Offering thousands of dial settings, they assure positive, low cost security. Write us on your school letterhead. A free sample lock will be sent for your inspection. When you place your order, combination charts for essential information will be provided free. With orders of 100 or more locks, an attractive leatherette cover for these charts will also be sent to you free. You'll like this control system.



**NATIONAL LOCK COMPANY**  
ROCKFORD • ILLINOIS  
LOCK DIVISION



## That "Straight-From-Home" Taste....

**R**EMEMBER that friendly, familiar flavor of Kellogg's Pep?

Your students do, too—they know Kellogg's cereals as well as they do the kid who lived next door back home.

That's why Kellogg's cereals are so welcome to undergraduates. They're used to them. They like 'em. They want them. As

a matter of fact, Kellogg's cereals are far more popular than any other brand.

Order the individual size and see how the students go for a package of their own.

P.S. to Dietitians: a single bowlful of Pep contains the day's need of vitamin D—plus twice as much thiamine (vitamin B<sub>1</sub>) as the good whole wheat from which it's made.

KELLOGG'S CORN FLAKES • RICE KRISPIES • PEP • KELLOGG'S 40% BRAN FLAKES • KRUMBLES  
KELLOGG'S SHREDDED WHEAT • KELLOGG'S RAISIN BRAN FLAKES • CORN-SOYA • RICE FLAKES • ALL-BRAN

MORE STUDENTS LIKE *Kellogg's* BEST

THE GREATEST NAME IN CEREALS

Battle Creek and Omaha

**NO EXTRA  
CHARGE**  
FOR 14 TO 20 GAUGE STEEL PARTS

THERE'S  
*No Extra Charge*  
FOR THESE EXTRAS  
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*Wakefield*®

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CHARGE**  
FOR FULLY COMPENSATED BALLASTS



When you buy or specify Wakefield, you pay nothing extra for all the extra quality and extra features that are built into Wakefield equipment. You pay nothing extra for the fact that the Grenadier II four-foot unit can be washed in 1/3 to 1/2 the time required for the average four-foot unit. You pay nothing extra for the fact that the Plaskon reflectors on the Star slide in and out like drawers. You pay nothing extra for the fact that you can relamp through the top, side or bottom of the Grenadier II and IV. And so on—extra by extra. It just naturally pays to buy Wakefield because you don't have to pay for the extras.

The F. W. Wakefield Brass Company, Vermilion, Ohio

**NO EXTRA  
CHARGE**  
FOR CHEMICALLY  
PLATED UNDERCOAT  
TO INHIBIT RUST

**NO EXTRA  
CHARGE**  
FOR FAVORABLE BRIGHTNESS RATIOS

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FOR ONE-MAN HANGING EASE

**NO EXTRA  
CHARGE**  
FOR TIME SAVING  
MAINTENANCE FEATURES

# *Wakefield* Over-ALL Lighting



THE GRENADE II



THE COMMODORE



THE STAR





# these aluminum pitchers *STAY NEW-LOOKING*



(Just the thing  
for careless Kate)



In spite of kitchen bangings and occasional falls, Wear-Ever Aluminum Pitchers keep their good looks. That's because their sturdy construction is combined with an extra tough aluminum alloy that makes them highly dent resistant. Also, they are light to handle and won't rust. A smart buy considering the way they cut your replacement costs and make friends at the table. See your supply house representative or mail the coupon to The Aluminum Cooking Utensil Company, 4011 Wear-Ever Building, New Kensington, Pa.



WITH COOL HANDLES  
(Style A)  
3½ and 4 qt. sizes  
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BAKELITE HANDLES WITH  
FINGER SLOTS  
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1½, 2½ and 3½ qt. sizes  
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WELDED ALUMINUM HANDLES  
(Style C)  
1½, 2½, 3½ qt. sizes. Two  
larger sizes have guard to  
retain ice when pouring.  
Natural or Alumilite Finish



WITH COVER  
(Style D)  
1 and 2 qt. sizes. All aluminum  
including knob on cover. Covers  
extra. Alumilite Finish Only.

NOW MADE OF EXTRA HARD ALLOY

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*Aluminum*  
...the metal that is friendly to foods

The Aluminum Cooking Utensil Co.,  
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New Kensington, Pa.

Please quote me on \_\_\_\_\_ pitchers  
style A ☐; B ☐; C ☐; D ☐; capacity \_\_\_\_\_ qts.,  
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NAME \_\_\_\_\_

WITH \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

# MORE FLOOR SPACE — MORE SEATS

— at lower cost per seat, with



UNIVERSAL Roll-A-Way GYMNASIUM STAND for space-saving indoor seating.



UNIVERSAL Fold-A-Way GYMNASIUM STAND neat, compact, attractive indoor seating.

Send us your present or proposed gym measurements. Our engineers will help you plan your seating for flexibility, space saving, safety and economy. No cost or obligation. Ask for our new, complete catalog.

## Universal

### FOLD-A-WAY and ROLL-A-WAY GYMNASIUM STANDS

Seat your capacity crowds comfortably and safely — and when your stands are not in use, roll or fold them away — and you'll have considerable additional space available for practice courts, calisthenics and other activities where maximum floor space is needed.

Universal Fold-A-Way and Roll-A-Way gymnasium stands provide all this flexibility, plus more rows of seats — at a lower cost than you'd pay for permanent seating. They're engineered and built to fit individual requirements or special seating needs — and they offer the advantages of a permanent installation plus the valuable space saving features of a removable stand — without the expense of erecting or dismantling for each occasion.

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HAMILTON MANUFACTURING COMPANY

Two Rivers, Wisconsin

# Amazing *New* Development in Portable Sound Projectors

Designed for  
A.C. or D.C.  
Operation



## Actual Lift-up Weight Only 20 lbs.!

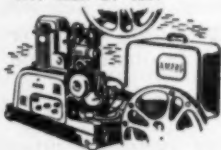
The projector and amplifier unit alone of the new Ampro Stylist weighs only 20 lbs. A young girl can easily lift it up to place on stand or table. Lift-off case with speaker and accessories weighs less than 9 lbs.!



**Truly Portable**  
Complete one-case unit, including projector, amplifier, lift-off case with speaker and accessories, weighs less than 29 lbs!

The Ampro  
*Stylist*  
\$325.

complete including jack for  
microphone and  
phonograph



**Quick Easy Set-up**  
Just lift off case, snap permanently attached reel arms in place — and the "Stylist" is ready to thread.

### HIGHLIGHTS:

Entire unit in one case measures only 17½" high, 9¾" wide, 16" long. Standard, time-tested Ampro projector mechanism and sound head. Fast automatic rewind. Uses standard lamps up to 1000 watts. Triple claw movement, new slide-out removable film gate. Coated super 2-inch F1.6 lens. Many other exclusive Ampro features.



**Simplified Operation**  
Central operating panel, with simplified knob controls, conveniently mounted on operator's side of projector.



**For Small Groups**  
Quiet-running, easy to set up quickly, the "Stylist" is ideal for classroom and small groups.



**For Larger Audiences**  
The "Stylist" delivers adequate tone quality, volume and illumination for larger audiences.

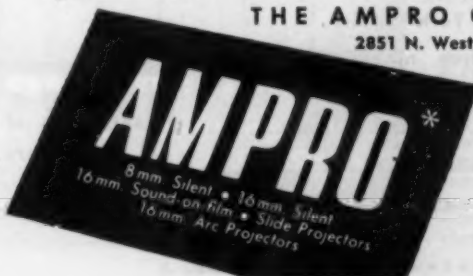
## A new streamlined, lightweight projector combining precision quality, unusual compactness and popular low price

Here is the *perfect* 16mm. projector for the school field — the culmination of more than 20 years of experience by Ampro in building fine precision projectors that are used and approved by leading school systems, universities, museums and libraries all over the world.

*Astonishing light weight and compactness*—made possible by the clever utilization of the new, tough, light materials—make the Stylist ideal for easy moving from room to room—for use by small or large groups. *Tested Ampro quality design and construction*—assure ease of setting up, simplicity of operation, splendid tone quality and illumination and long, satisfactory service. *Remarkable low price*—\$325 *complete*—means outstanding value and assures budget approval in these economy days. Ask your dealer *today* for an eye-opening demonstration of this new record-breaking Ampro "Stylist"!

Write for free circular giving full detailed "Stylist" specifications.

THE AMPRO CORPORATION  
2851 N. Western Avenue, Chicago 18, Ill.

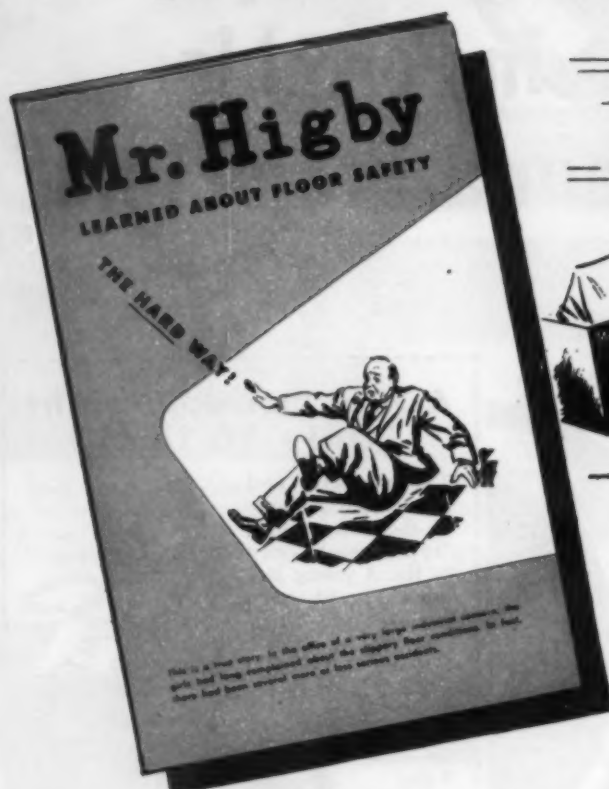


\*Trade Mark Reg. U. S. Pat. Off.

A General Precision Equipment  
Corporation Subsidiary



**This book...in 10 minutes...  
prevented 1037 accidents!**



**Reading time to learn how: 60 seconds**

Of course there was more to it than that. But it started when the office manager of a prominent company read a copy of *Mr. Higby Learned About Floor Safety the Hard Way*.

In its pages he learned the solution to a long-standing problem: a waxed office floor hazard that was claiming 4 or 5 slip victims week after week. The result: a way to keep his floors so slip-resistant that in five years since (when 1040 falls might have occurred) *there have been only 3 slip accidents.*

If you've searched for an answer to slippery floor accidents, perhaps this booklet can help you, too. In plain talk it explains the whys and wherefores behind the care of floors. It tells how to avoid slippery floors, and how the Legge System of Safety Floor Maintenance can help you. And it shows you how to eliminate waste motion in floor upkeep to save precious dollars.

How much is it worth to *you* to read this book? There's only one way to find out. Send for a free, no-obligation copy today. Just clip the coupon to your letterhead and mail.

Walter G. Legge Co. Inc.  
101 Park Ave., New York 17, N.Y.

Please send me a free, no-obligation copy of your Mr. Higby book.

Signed \_\_\_\_\_

Title \_\_\_\_\_

Types of flooring \_\_\_\_\_

Area \_\_\_\_\_ sq. ft.

HB-8.

**LEGGE SYSTEM**  
of Safety Floor  
Maintenance

(advertisement)

## New polish produces **SLIP-RESISTANT GYM FLOORS**

**Postpones resanding  
and refinishing**

GYMNASIUM FLOORS can be kept attractively buffed and protected from wear without making them slippery, with a new floor polish recently developed by the Walter G. Legge Co.

The new product, called Trafco, makes flooring safer than if no polish were used at all. It can be buffed to as high a gloss as is wanted, for buffing increases the safety factor. These findings were reported by Underwriters' Laboratories in their tests of the product.

Trafco satisfies the interests of both the administrator—who is anxious to properly protect expensive gym floors from wear; and of the coach—who wants safe playing surfaces for his students. Trafco's slip-resistant surface is also extremely wear-resistant, and protects the flooring while it protects the players.

### **SIMPLIFIES MAINTENANCE**

In its formula, Trafco contains both polishing and cleaning ingredients. So it simplifies the job of maintaining gymnasium floors.

Severe tests have shown that Trafco resists "burn" marks and soiling. But any soiling that finally takes place is held on the surface, where it cannot work into the floor. So even a badly worn floor can be easily and quickly restored—just by applying more Trafco. Its cleaning action removes the dirt, and its polishing action restores the shine—all in one operation.

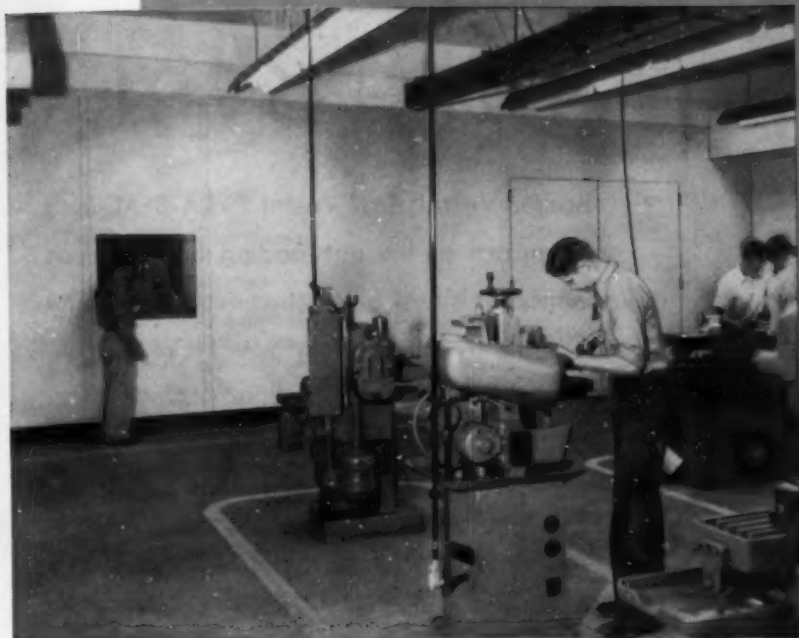
### **ELIMINATES RESANDING**

Because this simple restoring procedure is so completely effective, and can be repeated again and again, tests show Trafco practically eliminates the need to refinish and resand flooring periodically. It sharply reduces the labor needed to maintain gymnasium floors and requires less materials as well.

Trafco Safety Floor Polish is designed for use on wood and cork floors, but is also effective on linoleum, magnesite and other floors. It is a product of the Legge System of Safety Floor Maintenance. For further details, send the coupon at the left of this page to the Walter G. Legge Co., Inc.

# Hauserman Movable Steel Interiors...

## THE SUPERINTENDENT'S DELIGHT



Hauserman Movable Steel Interiors  
in the new Cloud Foster Engineering  
Building, Fenn College, Cleveland.

**A**TTRACTIVE SURROUNDINGS and excellent sound control assure proper teaching conditions. Combined with rock-bottom maintenance costs, they're any school superintendent's delight.

Attractive Hauserman *Movable* Steel Walls assure welcome quietness to any classroom . . . more than conventional walls that are over twice as thick. About all the maintenance that's ever required is occasional soap and water washing.

And, of course, Hauserman Steel Walls can be moved whenever new floor layouts will improve teaching facilities.

A Hauserman representative will be glad to discuss these and all the other advantages of Hauserman *Movable* Steel Interiors with you, your architect and your builder. Just write or call the Hauserman office or representative nearby, or contact *The E. F. Hauserman Co., 6788 Grant Ave., Cleveland 5, Ohio.*

### Specialists in Service

We assume undivided responsibility for complete interiors . . . shop drawings, building measurements and installation. We supply all products complete with hardware, wiring raceways and accessories. Our experienced erection crews are on call for alterations and additions. Our engineers are always at your service.



# HAUSERMAN

## MOVABLE STEEL INTERIORS

WALLS • WAINSCOT • RAILINGS  
ACOUSTICAL CEILINGS • COMPLETE ACCESSORIES

For every commercial, industrial and institutional need

**FREE**

Catalog to Help You Plan

You'll find Movable Steel Interiors to meet your exact requirements in our complete, 68-page Hauserman Catalog 49. Write for your copy today.



## "...the FIRST DUTY of TRUSTEES..."

As a Trustee of a College or University your responsibilities may be greater than you think!

To acquaint you with some aspects of the law, and to suggest measures which you can take to protect both yourself and your institution, Insurance Company of North America has prepared a pamphlet which will assist you to review your responsibilities.

Court decisions are cited defining trustee responsibility for the preservation of properties, funds and other assets, and the safeguarding of life. The important role that insurance plays in protecting you in the proper discharge of your responsibilities, both legal and moral, is explained. Also outlined are the services of Insurance Agents or Brokers in obtaining a comprehensive survey so that adequate protection may be obtained.

To get a copy ask any local Agent representing one of the NORTH AMERICA Companies. No obligation, of course.



**INSURANCE COMPANY OF  
NORTH AMERICA**  
COMPANIES. *Philadelphia*

INSURANCE COMPANY OF NORTH AMERICA ★ PHILADELPHIA FIRE AND MARINE  
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## PYRA-SEAL

Another Vestal first! Vestal PYRA-SEAL long recognized as the outstanding floor seal on the market is now *better than ever before*. The NEW PYRA-SEAL offers you NEW advantages in floor beauty . . . floor protection . . . floor maintenance economy. Only the NEW PYRA-SEAL has ALL of these advantages:

- \* The NEW PYRA-SEAL dries to touch in LESS than 2 hours. Can be steel wool-ed and given another coat after 4 to 5 hours drying time.
- ◆ **QUICKER DRYING**—Dries in half the time . . . your floors are back in service sooner.
- ◆ **60% to 80% MORE WEAR**—proved by tests with Taber Abrasers (the official precision instrument to determine wear and abrasion resistance).



Write today for detailed information.

- ◆ **HIGHER GLOSS** yet maintains celebrated slip resistant safety.
- ◆ **EASIER TO APPLY AND MAINTAIN**—No lap marks; fewer rubber marks; does not rubber burn. Can be scrubbed without damage. A stronger, tougher, longer-wearing finish.

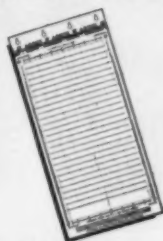
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These stencil sheets have guide lines for two or three column school newspapers. Sharpen the appearance and quality. Invaluable in putting out a professional looking paper in less time.



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Bulletins, records, forms, course outlines, and other paperwork constitute one of the factors limiting your enrollment. But you can ease this limitation by speeding up and simplifying the work of your Duplicating Department.

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To meet your needs for sharp, low-cost copies of anything typed, written, or drawn, A. B. Dick has a complete line of mimeographs. For use with all makes of suitable stencil duplicating products. There's a model to fit every requirement of production and price. To get the whole story, check with your local A. B. Dick Distributor, or simply mail the coupon below.

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Brings you all the essentials—legibility, speed, versatility, easy operation, and low overall cost—with no sacrifice of one for another.

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STATE \_\_\_\_\_

*Mail this  
Coupon  
for more  
information*



*they built  
as they teach...*

## plan now for future savings

The magnificent new 26-story home of *John Hancock* MUTUAL LIFE INSURANCE COMPANY, Boston, is an impressive example of maintenance savings.

Adopting their own business creed as their planning policy the owners placed emphasis on operating and up-keep economies.

To achieve sizeable maintenance savings they adopted movable partitions with a baked-on enamel finish . . . exterior windows which can be washed from the inside . . . lavatory floors untouched by pipes, partitions or fixtures to minimize cleaning labor . . . service closets lined with washable glazed tile . . . and other notable cost-saving innovations.

SLOAN is especially proud that its Flush Valves were selected on the basis of both faultless performance and exceedingly low maintenance cost.

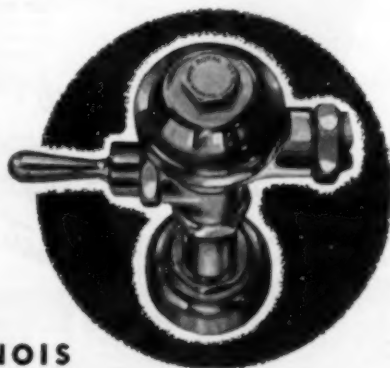
Unequalled records show Sloan Flush Valve maintenance costs as low as  $\frac{1}{4}\text{¢}$  per valve per year!

CRAM AND FERGUSON, Boston  
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TURNER CONSTRUCTION CO., New York  
General Contractors

M. AHERN COMPANY, INC., Boston  
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more **SLOAN Flush VALVES**  
*are sold than all other makes combined*



SLOAN VALVE COMPANY • CHICAGO • ILLINOIS

Case Institute  
of Technology Protects the  
Beauty of its Buildings  
and its Campus with

*Central  
Heating-*

...and Protects its Central Heating System

with **RIC-WIL**  
Insulated Pipe Units



New Tomlinson Hall during construction—since completed



➡ Ric-wil Units in trench, Main Bldg. at left

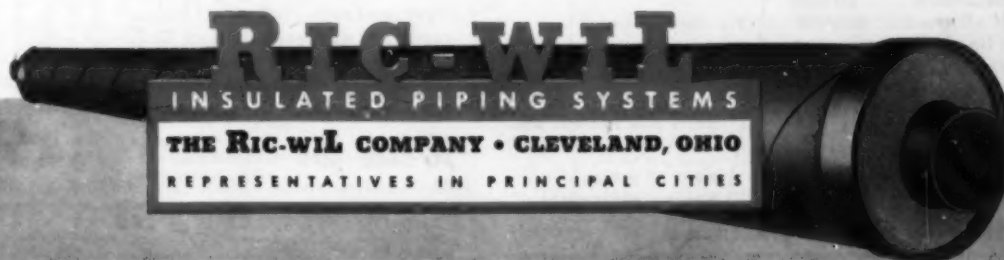
Looking toward heating plant, Physics Bldg. at left ➡



**S**MOKE, soot, fumes and grime have no place on the campus proper! They've been permanently barred at Case Institute of Technology by a forward thinking administration and a modern Central Heating System. Many hundreds of feet of Ric-wil Insulated Piping separate the heating plant from new Tomlinson Hall and other principal campus structures. Case Tech is one of more than four hundred insti-

tutions of higher education using Ric-wil Insulated Piping for Central Heating. This overwhelming preference is based on Ric-wil's prefabrication methods which assure high thermal efficiency, maximum protection, corrosion resistance and durability for Central Heating steam or hot water lines . . . with installation requiring a minimum of time, work and cost.

*Ric-wil engineers will be glad to consult with you on your Central Heating Piping problems. For full information write The Ric-wil Co. Dept. 10Y.*





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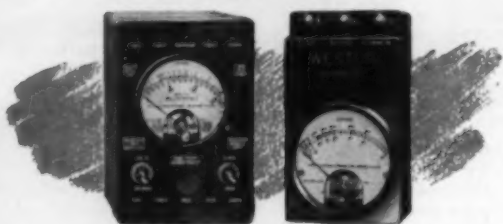


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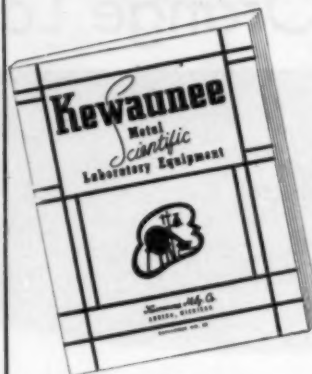
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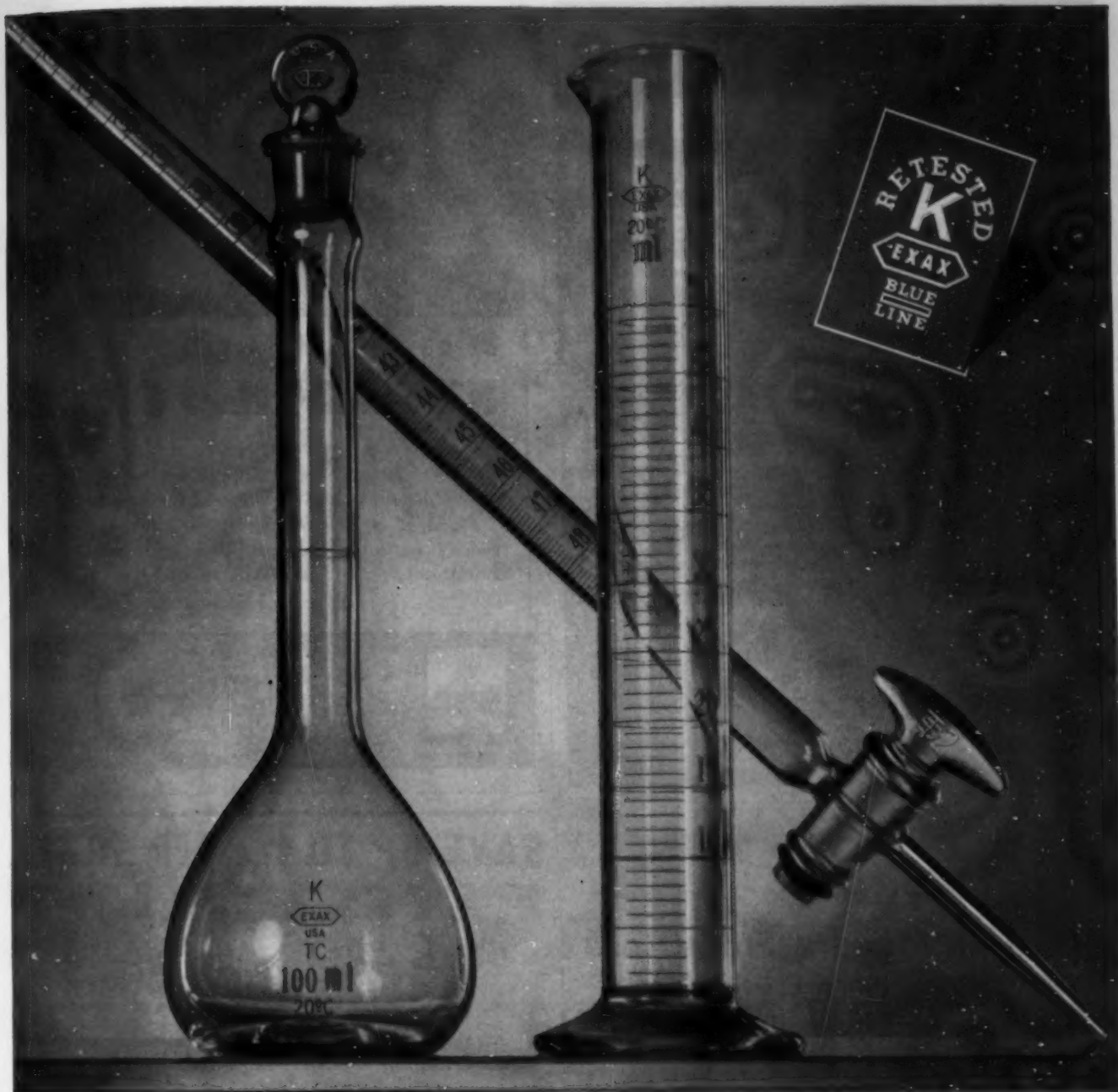
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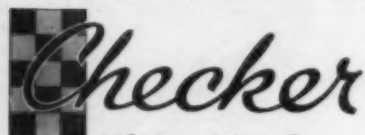
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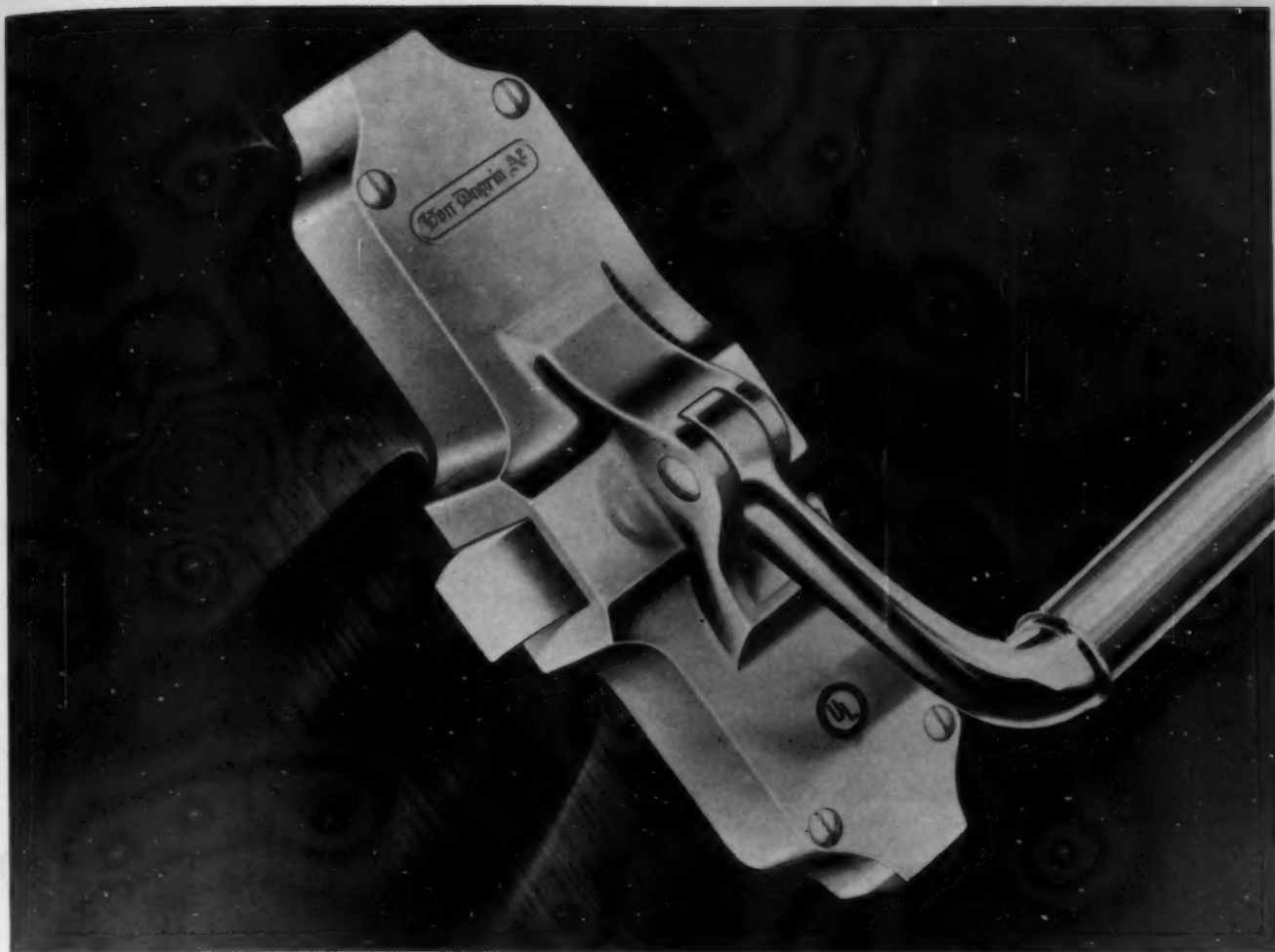
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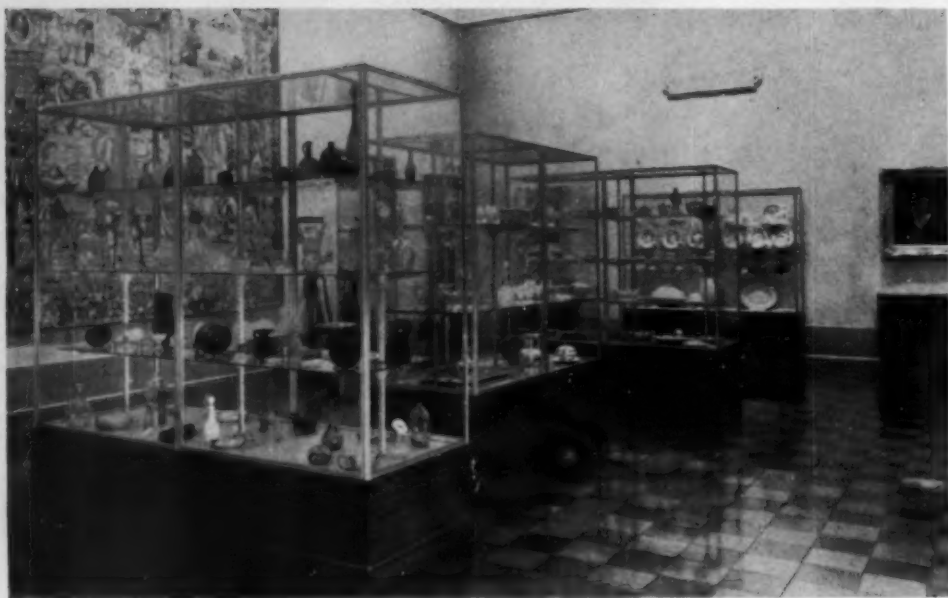
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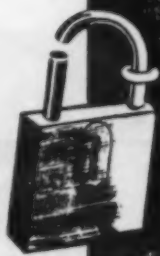
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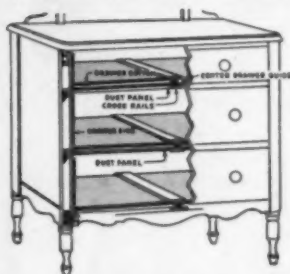
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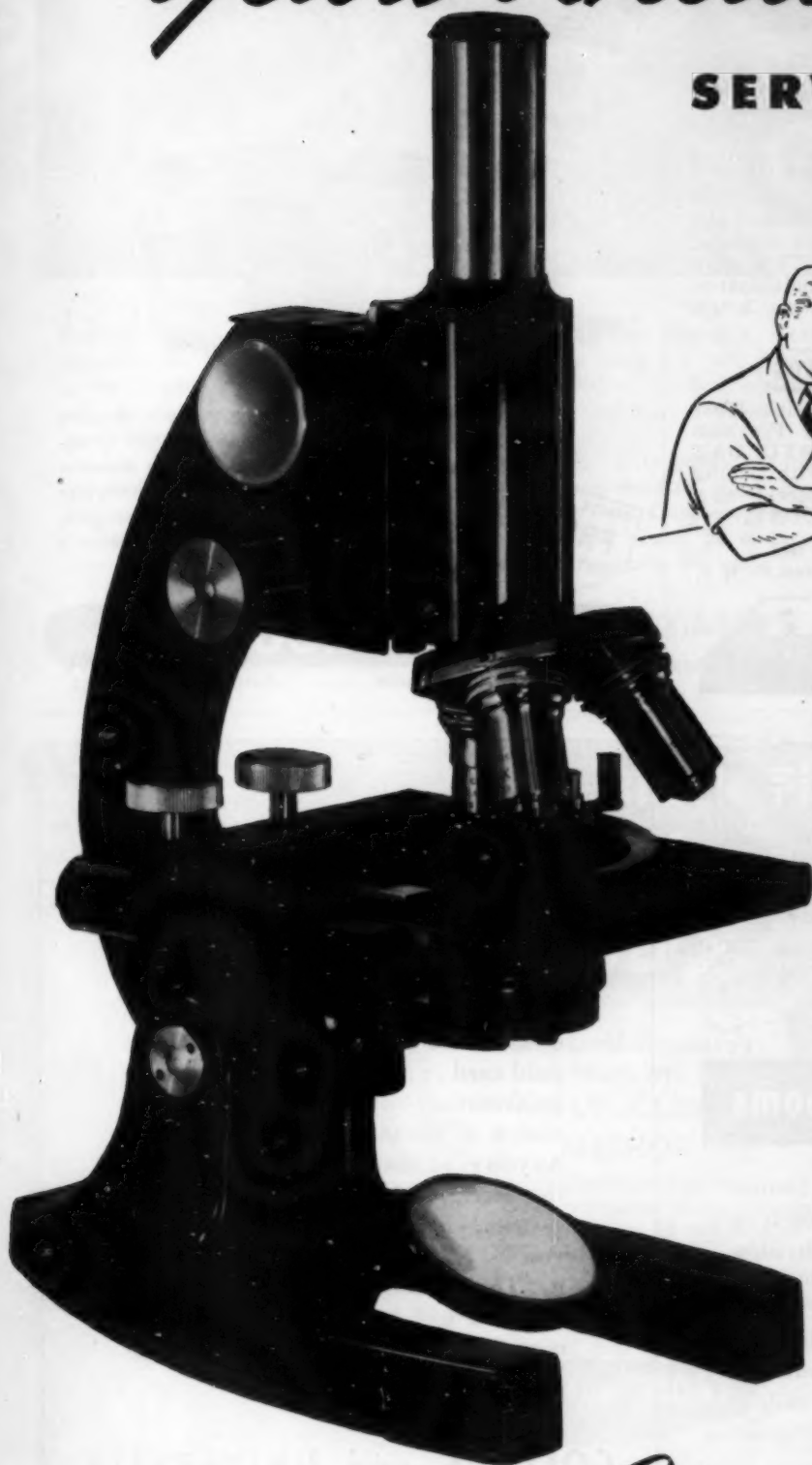
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From coast to coast, leading schools recognize Peterson's reputation for quality furniture for laboratory, library, vocational and home economics departments. What ever your requirements may be, call on Peterson's experts for an economic solution to your problems . . . No obligation is incurred.

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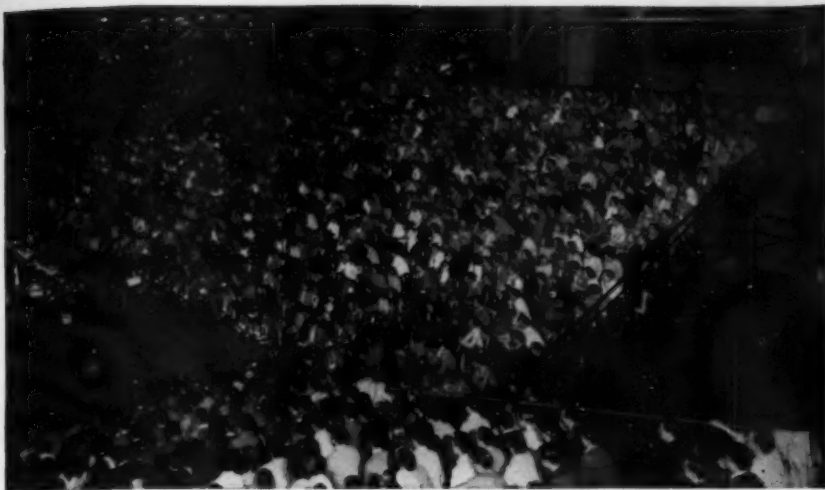
**LEONARD PETERSON & CO., INC.**

1228 FULLERTON AVENUE . . . . . CHICAGO 14, ILLINOIS

# SERVICE

Between editorial material and advertising pages in this and every issue—there's a detachable, postage prepaid card . . . to help you get product information on one or a dozen items with a minimum of effort and time. As you read the advertising pages and the descriptions in the "What's New" section, check the items that interest you . . . use the card. Sign it, mail it. The manufacturer of each item checked will be asked to send you complete details, no charge, no obligation.

**COLLEGE and UNIVERSITY  
BUSINESS**



Indiana University uses to good advantage Williams Portable Steel Grandstands moving them as the occasions arise from the field house to the stadium. The two side grandstands seat 5,000 each. Built sectionally, so that two workmen can handle any section with ease. All welded construction, no loose bolts or connections.

The 10,000 seats constituted the initial order. A reorder calls for two end stands seating 1,500 each. Orders—then reorders—that's the Williams story. Whether you need a two, or fifty, row stand—indoor or outdoor—portable or permanent—call in Williams first. Save time, worry, money. Williams construction cuts insurance costs "to the bone."

**WILLIAMS *Steel* GRANDSTANDS**  
PORTABLE • PERMANENT INDOOR • OUTDOOR FOLDING • ROLLING

*This 50 Row*  
**WILLIAMS**  
*portable*  
**GRANDSTAND**  
*leads a dual life*

FILL IN . . . TEAR OUT  
**MAIL!**

WILLIAMS IRON WORKS, INC.  
450 East 102nd St., New York 29, N. Y.

Gentlemen: Send me your new FREE grandstand catalog.

My name \_\_\_\_\_

School \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

THIS IS THE  
**MULTI-CLEAN METHOD!**



Scrubbing with Multi-Clean Floor Cleaner and Floor Machine.

Electric Mopping to pick up water, suds and dirt rapidly before they can sink into wood fibers.



Applying Multi-Clean Floor Preserver and Waterproof Floor Wax.



**MULTI-CLEAN**  
PRODUCTS, INC.

**This Black Floor Looks Like  
NEW  
Today**

Unusual Results  
FROM THE  
**MULTI-CLEAN®  
METHOD**

Classroom floors\* blackened by years of oil treatment were restored to natural beauty by the Multi-Clean Method. No sanding or other special treatment was required. Much of the

\*In a mid-western city high school. Name of school on request.

soaked-in oil was brought out of the wood with the first annual Multi-Clean application. The second application brought out more, and after the third the floors looked like new.

**MAIL COUPON TODAY**

**MULTI-CLEAN PRODUCTS, INC.**

2277 Ford Parkway, Dept. 22A, St. Paul 1, Minn.

Gentlemen: Please send me more information about the Multi-Clean Method for cleaning, beautifying and preserving floors.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Floor and Rug Machines • Industrial Vacuums  
Custom Cleaning Chemicals • Permanent Floor Finishes

2277  
Ford Parkway

St. Paul 1,  
Minnesota



# WHAT'S NEW

NOVEMBER 1949

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 40. Just circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

## Slide Projector



Intended primarily for the educational and training fields, the new Spencer MC Delineascope, finished in gray and maroon, has been developed for the projection of color slides. It handles slidefilms, 2 by 2 inch slides or both slidefilms and slides. The operator can switch instantly from one medium to the other.

The new model is designed to accommodate a wide range of projection conditions. Operating with an inexpensive, cool 300 watt bulb, it produces improved screen brilliance and color contrast to the edge of the slide. Slides are easily inserted and are guided by slideways. The projector has a framing lever that centers the picture on the screen and a rotatable front enabling slidefilms to be rotated to any desired position. The efficient cooling system eliminates the possibility of contact burns. American Optical Co., Dept. CUB, Buffalo 15, N.Y. (Key No. 532)

## "Push-Button" Record Keeping

Mechanized record-keeping is now possible with the Robot-Kardex, an electrically operated unit of the Kardex visible records in a combination desk and cabinet which selects the desired record instantly and delivers it on a firm writing surface at desk height.

Robot-Kardex consists of a metal unit holding 4020 sets of Kardex records in 60 trays or slides and a desktop extension at which a clerk sits. When the operator taps a button, the desired Kardex slide appears, positioned mechanically at the right level for quick reference or posting. Thus the clerk has access to 4020 sets of visible records without moving from her chair or changing her posture. If needed elsewhere the record slides can be easily removed from the desk extension. Large institutions should find the system

effective in speeding up record keeping and in increasing output of clerical employees. Remington Rand, Inc., Dept. CUB, 315 Fourth Ave., New York 10. (Key No. 533)

## Boned Turkey

Boned turkey is now available in aluminum foil wrapped rolls under the name Tur-King. Utilizing all parts of the turkey meat with the exception of the neck, wing tips, liver, heart and gizzard, Tur-King is pressed into a long cylindrical package and wrapped in pure aluminum sheeting before being quick frozen. When ready to be used, Tur-King is cooked in the wrapper, thus reducing shrinkage during cooking and improving the flavor. The aluminum coating can be punctured, after cooking, to release juices for making gravy and for other purposes.

Turkey in this new form eliminates work and waste, has no bones and can be stored with a considerable saving of space. After roasting it can be served hot or cold, thick or thin, as dinner meat or in sandwiches, for salads, creamed dishes and in other variations. The product is the result of long research and should prove invaluable in dietary planning. Tur-King was developed by Norbest Turkey Growers Assn., Dept. MH, 212 Utah Oil Bldg., Salt Lake City 11, Utah, and National Turkey Federation, Dept. CUB, Mount Morris, Ill. (Key No. 534)

## "Selector" Pencil Sharpener

The new "Selector" pencil sharpener offers two types of dials. One, the outside point selector, can be adjusted to produce nine or more points, ranging from broad to fine, without removal or opening the receptacle. A second dial on the sharpener serves as a centering disc to hold all sized wood case pencils and crayons firmly in place. Cutters are case-hardened, under-cut and razor sharp, assuring an infinite number of selected points without splitting the lead. The unit has a spill-proof shaving receptacle with a nickel steel top and a heat molded acetate lower half. Automatic Pencil Sharpener Co., Dept. CUB, Rockford, Ill. (Key No. 535)

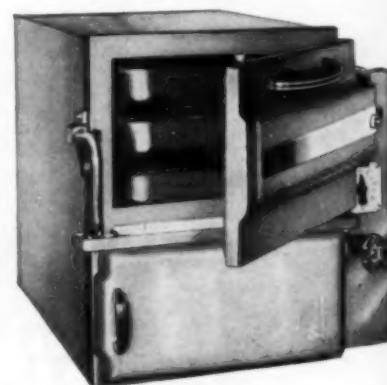
## Bulk Ice Makers

A new line of bulk ice makers has been developed by Frigidaire in models freezing 150, 300, 500, 1000 and 2000 pounds of ice from ordinary drinking water. The units freeze water into ice cakes of 25, 50 and 100 pounds, the time for freezing varying with the thickness of the ice cake, temperature of water and refrigerating compressor capacity. Grids, separated by dividers, are used in the four smallest models when ice cubes are desired.

Four inch cork insulation and heavy lids hold refrigeration loss to a minimum. Hinged lids are held open with two strong supports and, when closed, are clamped with hand-sized fasteners. Cabinet exteriors are finished in bronze lacquer over a special acid and rust-resistant paint. Brine tanks are made of heavy galvanized copper-bearing steel reinforced with iron channels. Frigidaire Div., General Motors, Dept. CUB, Dayton 1, Ohio (Key No. 536)

## One-Compartment Steamer

The Steamcraft "Cub" is a new model steamer for small institutions or as an auxiliary cooker for larger kitchens. It has a single compartment designed to hold 3 standard cafeteria pans and takes up a minimum of space. It is available with its own steel base but can also be used for counter or table installation. It can be operated by piped or tank gas or electricity and makes its own steam. The



unit is made of stainless metal with Fiberglas insulation. The Cleveland Range Co., Dept. CUB, 3333 Lakeside Ave., Cleveland 14, Ohio. (Key No. 537)

### Air Conditioned Pillow

A pillow which can be rejuvenated without removing the feathers is now available. Known as the Sani-Septick Air Conditioned Pillow, it has a patented vent introduced into the pillow construction through which the flat accessory of a vacuum cleaner is inserted. The hose is attached to the exhaust end of the machine and air is blown into the pillow, aerating and fluffing all feathers. Dampness, odors, feather decay and bacteria breeding conditions are eliminated and pillows are kept resilient and comfortable by this method. The patented vent is so constructed that no feathers can come out when the cleaning accessory is removed. **Clark Linen & Equipment Co., Dept. CUB, 303 E. Monroe St., Chicago 6. (Key No. 538)**

### Fungicide

A new non-toxic, astringent fungicide has recently been announced to help reduce foot infections in shower rooms, gymnasiums and other areas. Known as "Foam-X," the product is described as an effective fungicide which is mild and pleasant to use. Special sponge rubber mats provided by the manufacturer are saturated with "Foam-X" and placed adjacent to showers and similar areas for easy application. **Foam-X Co., Dept. CUB, Santa Barbara, Calif. (Key No. 539)**

### Refrigerated Milk Dispenser

Bulk dispensers which permit the rapid dispensing of milk and other liquids with a minimum of effort are now available in one can units in addition to the two and four can units previously developed. A new feature of all three sizes is a wrist-lift type dispensing



valve which permits filling glasses with a one-hand operation.

Designed to dispense milk and other liquids from bulk containers, the three

refrigerated stainless steel dispensing cabinets are designed to hold one, two or four 5 gallon dairy sealed milk cans, the bottoms of which are fitted with special flexible sterilized one-use tubes. The tubes fit inside the automatic-closing dispensing valve and the milk, when the valve is opened, flows by gravity into the glass without touching anything but the sterilized tube en route. According to the manufacturer, the dispenser meets all requirements of the U. S. Public Health Regulation No. 220.

The cabinet is easy to clean and keep sanitary since it is finished entirely in stainless steel. The milk cans are easily placed in the dispenser and the cabinets keep the milk refrigerated at a constant, low temperature which keeps it fresh and sweet for a matter of days, if necessary. The dispenser is attractive in appearance and offers a simplified, practical method of serving milk and other liquids. **Norris Dispensers, Inc., Dept. CUB, Merchandise Mart, Chicago 54. (Key No. 540)**

### Soluble Tea

A new soluble tea product known as Nestea, similar to the soluble coffee product, Nescafe, is now on the market. A blend of orange pekoe and pekoe teas, with equal parts of carbohydrates added to protect the flavor, Nestea is an economical and quickly prepared product for hot or iced tea.

With Nestea there is no waste as the exact amount of tea needed is measured into the cup for hot tea and boiling water poured over it which completely dissolves the Nestea. For iced tea, the needed amount of Nestea is placed in a glass, a small amount of boiling water poured over to dissolve it, and cold water added, thus effecting a saving in ice as well as in tea. **The Nestle Company, Inc., Dept. CUB, 155 E. 44th St., New York 17. (Key No. 541)**

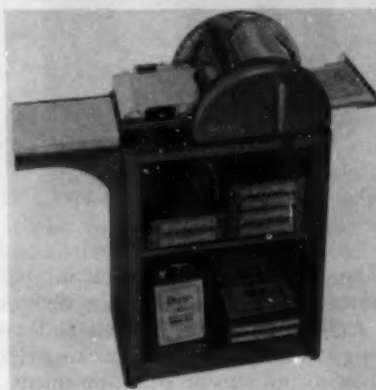
### Panelray Heater

The new "Overhead Panelray" heater, utilizing infrared rays to provide instantaneous heat, is designed for heating exposed areas as well as enclosed interiors. It should have particular application in heating temporary college buildings, gymnasiums and large assembly rooms.

Occupying overhead space, thus saving floor and wall space for other uses, the unit is gas-fired and keeps floors and working areas comfortably warm by the direct infrared rays which cannot be diverted by drafts or air currents. A series of louvers in the Panelray directs the rays downward, warming both the air and solid objects. **Day & Night Div., Affiliated Gas Equipment, Inc., Dept. CUB, Monrovia, Calif. (Key No. 542)**

### Ditto Liquid Duplicator

The new Ditto D-10 Direct Process Liquid type duplicator is equipped with "Magic Copy Control" which operates



with finger-touch and controls the length of run and brightness of copies produced. The Ditto Direct Process Duplicating Principle is employed in the new model which is low in price and economical in operation. It is designed to reproduce up to 140 copies per minute of typed, written, drawn or printed material through duplicating carbon, in as many as 4 colors in one operation. Paper in weight from 16 pound to heavy card stock and in any size up to 8½ by 14 inches can be used in the machine.

Features of the new model include a disappearing receiving tray, reversible feed tray to facilitate handling long and short sheets, quick shift paper guides, swinging feed rollers for refilling paper tray and stainless steel parts to guard against corrosion. The D-10 is finished in hammered gun-metal gray. **Ditto, Incorporated, Dept. CUB, Harrison at Oakley Blvd., Chicago 12. (Key No. 543)**

### Wall Type Convector

A new low height, high heating capacity, sloping top, wall type convector has recently been announced by the C. A. Dunham Company. Designed for single or multiple installation, a sheet metal "splice plate" conceals the pipe connections between units, giving the appearance of one long continuous convector when installed in a series.

The cabinet has a removable front, horizontally slotted outlet grille and the unit is available with a choice of 3 types of 1¼ inch finned pipe heating elements: steel pipe with steel fins; steel pipe with aluminum fins, or copper pipe with aluminum fins. The convector is 10⅝ inches high and 5½ inches wide, in lengths from 2 to 6 feet in 6 inch increments. It may be used on either steam or forced circulated hot water installations. **C. A. Dunham Co., Dept. CUB, 400 W. Madison St., Chicago 6. (Key No. 544)**



### Counter Model Steam-It



The new Steam-It is an insulated counter model pressure cooker designed for frequent food preparation and providing steam pressure cooking for smaller institutions or as a supplement to the regular cookers in larger institutions. Combining maximum cooking speed with minimum fuel consumption, the cooker operates under pressure from 5 to 15 pounds. It is equipped with all standard safety devices plus an inside self-sealing door.

The Steam-It generates its own steam and is gas-fired. It is sanitary and easy to clean, equipped with a shelf and pan supports which can be taken out for cleaning, and cooking is done in standard cafeteria pans, deep, perforated or solid. The Steam-It is finished in polished stainless steel with interior finish of anodized aluminum. A stand is available if counter installation is not desired. **The Market Forge Co., Dept. CUB, Everett 49, Mass. (Key No. 546)**

### Combination Mower and Cleaner

The "Houston" is an interesting device providing a combination power lawn mower and pneumatic cleaner which cuts and collects the grass and cleans the lawn in one operation. It can also be used for cleaning leaves and trash from the lawn. The machine is carefully engineered for safety and economical cost and operation. The grass and leaves are shredded when deposited in the bag and can be used for fertilizer at a later date if desired.

The "Houston" Mower and Pneumatic Cleaner is light in weight, due largely to the light weight of the power unit. It is easy to handle, compact and is powered by an efficient gasoline engine. **Houston Blow Pipe & Sheet Metal Works, Dept. CUB, Houston 1, Tex. (Key No. 547)**

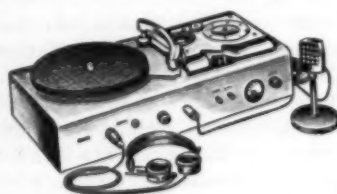
### Double-Action Floor Wax

Kare-33 is being introduced to serve two purposes in floor maintenance—to give floors a high gloss wax finish and at the same time to aid in the control of insects. This liquid water-emulsion wax has been approved by Underwriters'

Laboratories, according to the manufacturer, for anti-slip properties. It is non-inflammable, non-combustible and water-resistant and dries to a high luster in 20 minutes without buffing. It is said to kill insect pests within 24 hours and to retain its insecticidal quality for 3 to 6 weeks. The product is designed for use on asphalt tile, linoleum, rubber, finished wood, mastic, cement, terrazzo, painted surfaces and cork floors and is packed in 1 gallon cans and 5, 30 and 55 gallon steel drums. **Windsor Wax Co., Inc., Dept. CUB, Hoboken, N. J. (Key No. 548)**

### Player-Recorder Combination

Especially designed as an aid in language instruction is a combination disc player and wire recorder recently announced. The material to be studied is recorded on 33 1/3 or 78 r.p.m. discs by the instructor, each phrase followed by a pause long enough for the student to repeat the phrase. The student listens to the disc through earphones and repeats the material into the microphone. Both the disc recorded material and the



student's responses are recorded on the wire which is then played back for study. The unit may also be used effectively in speech correction, music and drama classes. The complete recorder, ready for immediate use, is packaged with microphone, stand, headset and 15 minute spool of wire. **Allied Radio Corp., Dept. CUB, 833 W. Jackson Blvd., Chicago 7. (Key No. 549)**

### Water Coolers

The new Cordley automatic water coolers, Models F-6 and F-10, are designed to operate by a slight touch of the foot on a pedal. Tops are of stainless steel and cabinet panels are of 19 gauge steel, electro galvanized, the finish being hameroid gray. The foot pedal is of stainless steel. Models F-6 and F-10 deliver approximately 9 to 15 gallons of water per hour, respectively, under average conditions.

Another new model is the standard water cooler with complete stainless steel exterior which is easily kept clean, sanitary and attractive in appearance. The cold water storage tank is also constructed of stainless steel with all seams electro-hydrogen welded. **Cordley & Hayes, Dept. CUB, 443 Fourth Ave., New York 16. (Key No. 550)**

### Laboratory Water Stills

A new design, incorporating many improvements, is offered in the new "Streamliner" model laboratory water still recently announced. Of polished stainless steel, the new stills are constructed in 3 streamlined offset sections with vapor-tight sliding joints which can be taken apart without tools in 10 seconds, thus simplifying cleaning both inside and out. Technical improvements in the operation of the new stills are also offered. All models are suitable for hard water use and operation is continuous and automatic. Electric, gas and steam heated models are available in capacities from 1 to 4 gallons per hour. **Precision Scientific Co., Dept. CUB, 3737 W. Cortland St., Chicago 47. (Key No. 551)**

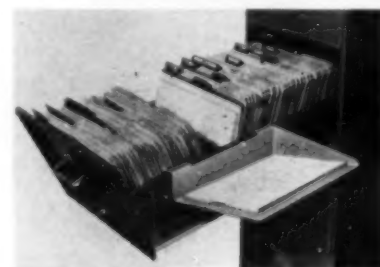
### Equipment Identification

Quick and simple identification of equipment is possible with the new Burgess Vibro-Graver, an electrical marking device which is used like a pencil and smoothly writes on steel, glass, plastic, wood and ceramic items. The device is supplied with a Diamond Point, Tantalum and Carbide Point for harder metals, glass, hardwood and plastics and with a Ball Point for soft wood and soft metals. It provides an ineradicable method of marking name, purchase dates, codes, inventory dates or series numbers on equipment.

The Vibro-Graver is available in a complete kit in a leatherette package. A booklet provided with the kit supplies instructions for operating this quick and inexpensive identification device. **Burgess Battery Co., Handicraft Div., Dept. CUB, 180 N. Wabash Ave., Chicago 1. (Key No. 552)**

### Aluminum Filing Shelf

A filing department accessory designed to speed up filing is an aluminum shelf to be hung on the side or front of the file drawer to hold the material to be filed. Made of light, durable, anodized aluminum, the shelf provides a handy place for records being filed and can be



placed in position or removed instantly. **The General Fireproofing Co., Dept. CUB, Youngstown 1, Ohio. (Key No. 553)**



## Product Literature

• The complete line of J-M Asphalt Tile colors, including colors added this year, is shown in the center spread of a folder recently issued by Johns-Manville, 22 E. 40th Street, New York 16. Various patterns possible with J-M Asphalt Tile for reception rooms, classrooms, corridors and offices are shown in full color in this "Johns-Manville Asphalt Tile" leaflet. (Key No. 554)

• Colleges using rubber mats in various locations throughout the institution will be interested in a new poster prepared by the American Floor Products Co., 1526 "M" St. N.W., Washington 5, D.C., entitled "The Do's and Don'ts of Rubber Mat Care." The Poster is designed to instruct users and those in charge of maintenance in the proper handling of rubber mats to secure the maximum length of life. (Key No. 555)

• A new series of quantity recipes has been developed by the Quaker Institutional Kitchen and is printed on 4 by 6 inch cards, each with a hole at the top so that it can be hung up during use. The first set in the new series consists of 11 recipes of 50 servings each covering breads, cookies, pancakes and waffles, meat loaf and other foods. The cards are available from The Quaker Oats Company, 141 W. Jackson Blvd., Chicago 4. (Key No. 556)

• "The Mark of a Modern Building" is the title of a 40 page booklet on PC glass blocks for industrial, commercial and public structures published by Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa. General and technical data, illustrations, construction details, diagrammatic drawings and specifications are included in the booklet. Glass block patterns are divided into decorative and functional groups and specific advantages of each are discussed. Four pages are devoted to the use of glass blocks in hospitals and schools. (Key No. 557)

• The "Optonic Color Compass" is designed to assist maintenance engineers, housekeepers and others concerned with painting and decoration in planning, selecting and using color scientifically. It is a color selector wheel which gives 8 different color schemes successfully applied to institutions for securing the full advantages inherent with the proper choice and use of 28 colors for interior painting. The compass outlines four plans for decorating 49 different rooms and is available from The Arco Company, 7301 Bessemer Ave., Cleveland 4, Ohio. (Key No. 558)

## Suppliers' News

The Aluminum Cooking Utensil Co., New Kensington, Pa., manufacturer of aluminum cooking utensils, announces

the appointment of B. E. Hiles as Manager of the Hotel and Industrial Division, succeeding George Peters who retired August 31 after 39 years association with the company.

The G. S. Blodgett Co., Inc., Burlington, Vt., manufacturer of baking and cooking equipment, announces the appointment of Paul C. Grimes as Sales Manager.

Hild Floor Machine Co., manufacturer of floor maintenance equipment, announces completion of its new building at 740 W. Washington Blvd., Chicago 6. Complete office, demonstration and factory facilities are included in the new modern building.

Standard Gas Equipment Corp. of Baltimore, Md. and Hart Mfg. Co. of Louisville, Ky. announce the consolidation of their commercial cooking equipment lines. The entire resources of the new organization will be devoted exclusively to commercial cooking equipment. Vulcan equipment will continue to be manufactured in Baltimore and Hart restaurant and luncheonette equipment will be manufactured in Louisville.

Change of Address was incorrectly given for the following firm in an earlier issue. The correct address follows:

Standard Scientific Supply Corp., 34 W. Fourth St., New York 12.

## WANT ADVERTISEMENTS

The rates for want advertisements are: 10 cents a word; minimum charge, \$2.50.

Address replies to COLLEGE AND UNIVERSITY BUSINESS, 919 N. Michigan Avenue, Chicago 11, Ill.

### POSITIONS WANTED

**Treasurer or Bursar**—Advancement from present position as Business Manager desired; twelve years experience as Business Manager and Assistant Treasurer with background of legal training accounting and banking experience. Write Box CW 75, COLLEGE AND UNIVERSITY BUSINESS.

**Business Manager**—Treasurer 10 years in small eastern university desires position with broader outlook; preferably West or Southwest; keenly interested in budgets, reports, systems, purchasing, supervision of all buildings, dining halls and auxiliary enterprises; versatile, energetic in athletics and extra curricular activities; good organizer. Write Box CW 76, COLLEGE AND UNIVERSITY BUSINESS.

**Superintendent of Building & Grounds**—Extensive background for 25 years in management of physical properties and proper preventative maintenance; age 50, married, no children, excellent references; will locate anywhere. Write Box CW 69, COLLEGE AND UNIVERSITY BUSINESS.

**Business Officer**—20 years diversified experience including management consulting, cost reduction, purchasing, inventory control, building maintenance, warehousing, college or private school preferred; age 42, married. Write Box CW 77, COLLEGE AND UNIVERSITY BUSINESS.

**Food Purchasing Specialist**—Seven years experience as buyer for wholesale handling complete grocery line and frozen foods; this included extra emphasis on quality selection; also has one year training in textiles; wants purchasing position; age 37. Write Box CW 78, COLLEGE AND UNIVERSITY BUSINESS.

### SPECIALISTS' EDUCATIONAL BUREAU

302 Metropolitan Bldg.  
508 N. Grand  
St. Louis 3, Mo.

College Cafeteria Manager—midwestern college; enrollment 1100; needs businesslike director; salary \$3600 to \$4000 calendar year.

### FOR SALE

Oxford, Conn.—156 acre hilltop farm estate, beautiful country, 80 miles New York, 15 miles New Haven; main house 13 extra large rooms, 4 baths, lavatory, unfinished inside (materials on premises to complete) admirably suited for conversion to farm school. Cottage 5 rooms, 1 bath, barn 30 cattle, top quality soil, former agricultural experiment station Yale, sheds, chicken coop, trucks, machinery, immediate sale settle estate. Cowing, 138 East 78 St., New York City 21.

## LOOKING FOR SOMEONE?

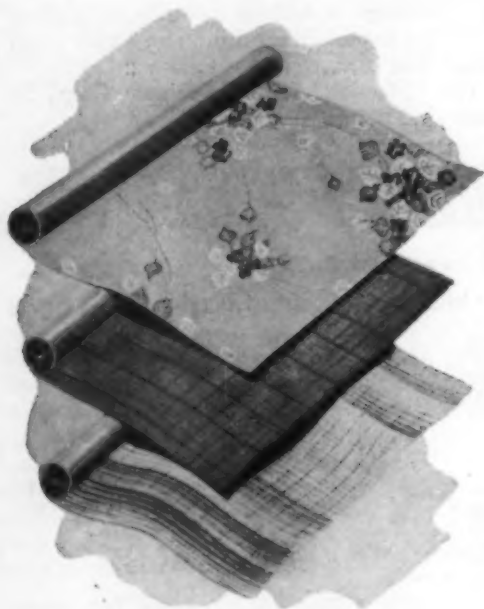
Someone to fill a vacancy in your staff—a Business Manager—Superintendent of Buildings and Grounds—Purchasing Agent—Director of Food Service and Dormitories?

Or maybe you are thinking about making a change. If so, consider placing a "Want Advertisement" in the next issue of College and University Business.



BEEN REDECORATING THESE  
DORMITORIES?

NO, INDEED! THAT'S FABRON...  
ALL WE DID WAS WASH IT!



FABRON offers more than 160 patterns and colors, many of them styled for use in dormitory rooms, classrooms, corridors, offices, etc.—a latitude of choice unmatched by conventional treatments. The material is furnished in easily handled rolls, 27" wide, and is applied in the same manner as wallpaper.

It's easy to mistake washed-down FABRON for a recent installation, *even after many years of service!*

Not only because FABRON's sunfast colors stay so clear and fresh . . . not only because its non-porous, lacquer surface resists dirt, stains and grime . . . but also because FABRON's toughness enables it to overcome plaster cracks . . . and permits simple inlay patching of any damage!

Literally thousands of FABRON institutional installations have proved conclusively that maintenance and redecorating costs go down with FABRON on the walls! Imagine how much maintenance expense *you* would save through not having to redecorate periodically.

Why, therefore, continue using short-lived wall treatments when FABRON will outlast not merely one — but *many* redecorating periods . . . and will pay for itself several times over with redecorating bills it saves!

Before you decide on your next decorating project, investigate FABRON. Send us a simple, basic description of your plans and we will submit suggested samples, together with an estimate of the material cost which will be within present day budgets. There's no obligation.

FREDERIC BLANK & CO., INC. • Est. 1913 • 230 PARK AVE., NEW YORK 17, N.Y.  
Represented in Canada by The Robert Simpson Company Limited—Special Contract Division

FABRON prevents fire-spread, too. Each roll bears the label of the Underwriters' Laboratories, Inc., sponsored by the National Board of Fire Underwriters.



**Fabron®**  
— the canvas-plastic-lacquer wall covering

For smallest lunchroom...for largest restaurant...

# NEW! custom-matched Hotpoint Electric FOOD WARMER



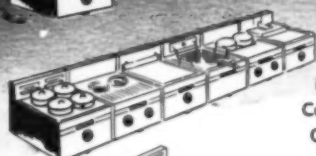
with the  
**EXCLUSIVE  
"HEAT WALL"**



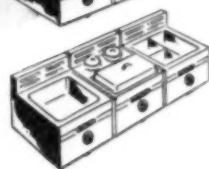
**NO "COOK-OUT"—NO "DRY-OUT"  
BECAUSE IT'S ELECTRIC!**



Plug in separately—no  
special installation required



Bank with  
other units  
in the Hotpoint  
Custom-Matched  
Counter Kitchen



or... Build your own  
serving table at amazing  
low cost by banking  
together as many Food  
Warmers as you require  
... each with separate  
temperature control.

Now you can store foods at their  
ideal serving temperatures—keep  
them "range-fresh" and appetizing  
for hours with dry electric heat.

- **All-over Even Heat!** Hotpoint "Heat Wall" delivers just the right amount of heat into food from all four sides, and bottom, too. Keeps entire food contents at serving temperature.
- **Dial-a-Temperature!** Variable

thermostat permits selecting heat  
at which any food stores best—  
for longest time.

- **High Speed!** Peak performance even under heavy load assured by super-speed Calrod® heating unit.
- **Your Choice!** Over a hundred pan and jar combinations can be used with selection of 3 adaptor top-plates available. Holds up to four 4-qt. jars!

## NEW PROFITS with added items!

Now even the *smallest* eating place can increase menu variety and customer traffic by preparing soups, chili, vegetables, barbecues, etc., in quantity... and holding them for hours at serving temperature.

*See it  
SOON!*

**ALL ELECTRIC  
COOKING**

with

# Hotpoint

\*A General Electric Affiliate

## MAIL COUPON TODAY!

HOTPOINT, INC.,  
Commercial Cooking Equipment Dept.,  
211 S. Seeley Ave., Chicago 12, Ill.

"ONLY HOTPOINT  
HAS THE  
HEAT-WALL!"



We'd like to see and hear about the new Hotpoint Electric HF1 Food Warmer.

Name.....

Firm.....

Address.....

City.....State.....



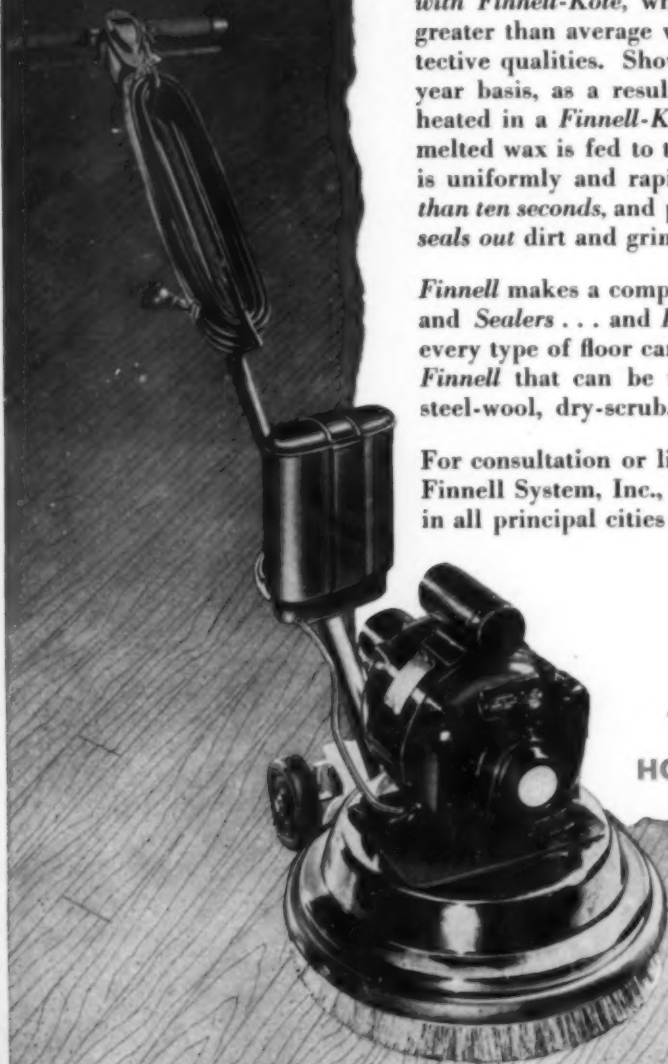
# Why Wax Floors So Often?

"To protect the floors and simplify maintenance," would be a logical answer. However, these purposes can be served, and *still* the frequency of waxing can be reduced, by using *The Finnell Hot-Wax Process*. In this process, *Finnell-Kote Solid Wax* is used, and it is applied mechanically with *Finnell Equipment*.

*Hot-waxing* affords greater penetration — allows the wax to *flow* into the pores of the floor — and thoroughly utilizes the wax solids. *Hot-waxing with Finnell-Kote*, whose genuine wax content is three to four times greater than average wax, produces a finish unique in wearing and protective qualities. Shows substantial savings in labor costs, on a year-to-year basis, as a result of fewer applications required. *Finnell-Kote* is heated in a *Finnell-Kote Dispenser* attached to a *Finnell Machine*. The melted wax is fed to the floor through the center of the brush ring, and is uniformly and rapidly spread by the revolving brushes. *Sets in less than ten seconds*, and polishes to a beautiful, non-skid finish that actually *seals out dirt and grime*. Contains genuine Carnauba.

*Finnell* makes a complete line of *Waxes . . .* also a full line of *Cleaners and Sealers . . .* and *Floor-Maintenance Machines and Accessories* for every type of floor care. The machine shown below is a *Motor-Weighted Finnell* that can be used to apply wax, polish, wet-scrub, scrub rugs, steel-wool, dry-scrub, sand, and grind!

For consultation or literature, phone or write nearest *Finnell Branch* or *Finnell System, Inc.*, 4411 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.



THE *Finnell*  
HOT-WAX PROCESS



**FINNELL SYSTEM, INC.**

*Pioneers and Specialists in*

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES  
IN ALL  
PRINCIPAL  
CITIES